From:
To: Environment and Public Affairs Committee
Subject: 'Inquiry into mechanisms for compensation for economic loss to farmers in Western Australia caused by contamination by genetically modified material'
Date: Thursday, 15 February 2018 9:05:44 PM

To Hon. Matthew Swinbourn

MLC Chair Standing Committee on Environmental and Public Affairs

Thank you for this opportunity to suggest a way that the scourge of genetically engineered canola could have a smaller negative impact on our farms. I am an organic farmer whose livelihood was threatened with the introduction of GM canola crops by a previous government. I seek to have GM test strips made freely available to growers such as myself, as a small form of compensation. Our ability to save and replant GM free, organic brassica seeds (as we have for over 3 decades) is in jeopardy now that GM canola is grown in W.A.

All growers should have the choice and the tools to expand their businesses and grow their profitability. I choose to save and replant GM free brassica seeds. Twenty vegetables from the brassica family I have grown for 30 years, they are some of our most nutritious and popular veges (eg: kale and broccoli, radish, turnip, cabbage, rocket, mizuna etc) .

European countries have made the decision to plough in GM crops to protect their environment. It would be the responsible thing for this government to follow suit and to reinstate the ban on GM and order the destruction of any plantings. Even if that step was taken, the brassica family of seed has a very long viability. Tasmanian trials of GM canola resulted in GM canola volunteers needing to be weeded out from around the trial site for more than ten years. I need therefore to test my brassica seeds for GM contamination on a regular basis, at least once a year, for the foreseeable future . The availability and cost of test strips is currently prohibitive, and I would like the committee to consider recommending the government makes the test strips freely available to any grower needing or wanting to know when contamination reaches them.

Obviously if contamination was found , I would need to purchase my organic brassica seed requirements from a seed merchant in a GM free state such as Tasmania or South Australia. This again would be a cost I previously did not have to bear.

Interestingly, at the time the government released GM canola into WA, several spokespeople for the government and GM industry said GM canola posed no threat to brassica vegetable and seed production.

From DAFWA "fact" sheet "Dispelling the MYTHS" …

"Under the conditions applied to the growing of non-GM and GM canola in Australia, contamination of neighbouring farms/crops at levels greater than the internationally recognised [only by the pro gm lobby, not by European and Australian and Japanese food retailers and manufacturers who demand GM Free, meaning zero %] 0.9% threshold is not expected to occur as

:• GM canola is predominantly a self-pollinator and is not a strong cross-pollinator.

• Australian studies have shown that in canola crops planted alongside each other the rate of cross-pollination found was less than 0.1% - well below the internationally recognised 0.9% threshold.

• Gene flow to other plants like fruit trees, vegetables, wheat or weeds is virtually

nil. In extremely rare cases where crossing may occur sterile hybrids can form but they can't reproduce."

Whilst fruit trees and wheat clearly do not present a problem, Brassica species weeds like wild radish, and brassica vegetables, will in fact readily cross pollinate with Brassica Napus (canola) and produce viable offspring. Even the Office of the Gene Technology Regulator (OGTR) has made statements which are at odds with the above assertions of DAFWA:

In the OGTR paper entitled 'The Biology and Ecology of canola (Brassica Napus) " we find on page 16 :"Brassica Napus and B. rapa (turnip weed) have a common set of chromosomes making interspecific outcrossing extremely common." There later in the document appears a list of 22 Australian plants and vegetables that canola will cross breed with, and evidence that hybrids have been found in the field and in glasshouses of of turnip, swede, mustard, mizuna, and rutabaga.

The OGTR admitted that GM canola will spread through brassica weed populations but do not deem this to be a risk as the weeds can be sprayed to remove them, with 24D and other more dangerous and expensive sprays!! This seemed hardly a desirable option, nor is it even a viable option for organic growers such as ourselves.

Another reference to the fact that GM canola will cross pollinate with other brassica plants came from the summary section of a paper from the Oregon State University Extension Service, in a "**Special Report 1064",** January 2006, by James R. Myers. The paper entitled "Outcrossing Potential for *Brassica* Species and Implications for Vegetable Crucifer Seed Crops of Growing Oilseed *Brassicas* in the Willamette Valley" .

It confirmed :

"The oilseed mustards known as canola or rapeseed (*Brassica napus* and *B. rapa*) are the same species as some vegetable crucifers and are so closely related to others that interspecific and intergeneric crossing can occur.

.Occur readily: *B. napus* canola with Chinese cabbage, Chinese mustard, pai-tsai, broccoli raab, and turnip

• **Occur more rarely**: *B. napus* or *B. rapa* canola with the *B. oleracea* cole crops (cabbage, kohlrabi, Brussels sprouts, broccoli, cauliflower, collards, and kale)

Genetically modified canola presents the greatest risk to vegetable crucifer seed crops. Although it is very unlikely that transgenes would persist once transferred to the seed crop, the presence of the gene would make the seed crop unsuitable for markets that have strict tolerances on GMO contamination. Transgenes are relatively easy to detect at very low levels, so it is likely that their presence could be detected even if only a few interspecific hybrids were found in a vegetable seed lot. Contamination could still be detected even if interspecific seeds were nonviable.
Conclusions There has been little study of gene flow between *B. napus* and *B. oleracea* or *R. sativum* under natural conditions. Further research is warranted to determine the overall risk in the Willamette Valley. … **The best solution at present is to maintain canola-free zones for vegetable seed production. These zones should not allow canola production or traffic bearing seeds."**

Further evidence comes from Japan where citizen science projects have identified

transgenic mustard plants growing along roadsides. RR plants have appeared elsewhere in a country that doesn't even grow GM crops. The contamination began around the ports where GM canola is imported, and has spread to precincts a considerable distance away.

Yet in spite of the above evidence and more (such as from Dakota USA where populations of wild turnip and Charlock were found to have turned transgenic) at the time just prior to the release, UWA Professor Stephen Powles was quoted in the *Farm Weekly* (letters 18/4/2011) saying "There are a small number of vocal people who are strongly opposed to GM. And most of them are unconstrained by the truth, in what they will say." The article went on to say "Professor Powles has also stressed GM canola cannot "cross-breed" with anything but canola."

However I found on the internet late one night that the same S. B. Powles had earlier, in 2001, co- authored a study titled *"Hybridisation between Brassica napus L [canola] and Raphanus raphanistrum L.[wild radish] under agronomic field conditions"* It states:"Due to the high fertility of the hybrids produced, these plants become a bridge for gene escape into R. raphanistrum [wild radish] or become weedy themselves. …. If farmers concentrate on limiting volunteers for several years after growing herbicide-resistant B. napus [Round Up Ready Canola] varieties this will reduce the likelihood of gene escape via hybridisation."

The the then Minister for Agriculture, Terry Redman was sent this information by myself, but ignored it, and a plethora of good advice from others, and released this extremely troublesome GM canola into W.A. in 2009, first as very large trials .

Overseas and even Eastern states examples show that contamination of the environment with transgenic canola is swift and irreversible.

I hope this inquiry finds it reasonable to make test strips freely available, and to compensate growers who , based on the results rendered by these test strips, find that have to buy in seed from GM free growing areas plus the quarantine inspections and fees this would no doubt entail. Of course should it be found on testing that the wild radish in our pastures, which we biological farmers of the south west currently graze numerous species (pigs, poultry, cattle , sheep, alpaca) in a bid to regenerate our land and sell nutrient dense organic meat to a population needing to prevent expensive health problems, another can of worms will emerge. All these problems were forseen by many prior to release. We are grateful that this Labour government is at least trying to right the wrongs, but it is clear to me the sooner that it acts on it's pre- election promise to bring back the moratorium in WA, the cheaper it will be to contain the damage.

Thank you for reading my submission.

From Bee Winfield

Here's to food grown in living soil for good health and a safe climate.
Regards from Bee