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SUBMISSION

Re: Application A1192 MON87429.

Submission from:

MON87429 maize is genetically engineered to tolerate being sprayed with glufosinate, dicamba, 2,4-dichlorophenoxyacetic acid (2,4-D) and aryloxyphenoxypropionate (AOPP) acetyl coenzyme A carboxylase inhibitors (known as FOPs herbicides). It is also genetically modified to provide tissue-specific tolerance to glyphosate, to facilitate hybrid seed production. A1192 seeks to change the Food Code so that the products of MON87429 maize and the herbicide residues they may also contain are approved for inclusion in the human food supply.

Dear FSANZ,

I request that you reject application A1192 by Bayer/Monsanto. It would breach the confidence of consumers in the regulatory capacity of FSANZ and to be frank even be a reckless under-taking for FSANZ to approve this application. This is due to the fact that there is clear evidence that the introduction of food specifically engineered to allow for the application of multiple synthetic agrichemicals each linked individually to health effects is suspect on the grounds that

- This company has not been able to adequately demonstrate the safety of the agrichemicals designed to accompany the use of this crop. And it would be nonsensical to in any way argue that these chemicals would not be contaminating the resultant food in any way other than has already been shown to occur with their use elsewhere in agricultural practices.

Application A1192 is not in keeping with the objects of the FSANZ Act which are as follows

The FSANZ Act

The object of this Act is to ensure a high standard of public health protection throughout Australia and New Zealand by means of the establishment and operation of a body to be known as Food Standards Australia New Zealand to achieve the following goals:

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- (a) a high degree of consumer confidence in the quality and safety of food produced, processed, sold or exported from Australia and New Zealand;
- (b) an effective, transparent and accountable regulatory framework within which the food industry can work efficiently;
- (c) the provision of adequate information relating to food to enable consumers to make informed choices;
- (d) the establishment of common rules for both countries and the promotion of consistency between domestic and international food regulatory measures without reducing the safeguards applying to public health and consumer protection.

This application fails to provide evidence of “a high degree of confidence in the quality and safety of the food produced”.

This application is requesting that this novel corn be approved for consumption by consumers.

This is in the face of the following information.

The research to date is very clear that crops such as these result in residual levels of agrichemicals in foods.

The research also shows that these chemicals at the residual levels known to occur as a result of their use are responsible for disease in both animal model and human studies.

1) A) Glufosinate was shown in zebrafish embryos (an animal model system) to cause demonstrably significant levels of cell death in the developing brain at 0.5 ppm.(1) Residual levels of Glyphosate are readily be detected in or on cereals at 0.8 ppm. (2) Therefore, the equivalent level of residual Glufosinate herbicide as has been found in terms of Glyphosate levels that would be detectable on or in cereal that’s harvested after being sprayed with this herbicide causes brain death in zebrafish embryo brains.

B) Glufosinate can also cause autism (3), hippocampal memory loss(4), and destruction of neural stem cells in the subventricular zone,(5) it’s very likely in human to cause neurological toxicity, and could be responsible for behavioral and neurological issues that are being seen in increasing rates seen in humans.

2) It is now very common knowledge that the IARC Working Group classified **glyphosate** as “probably **carcinogenic** to humans” (Group 2A) in 2017. (5) and subsequently in courts has been legally recognized as being the cause of cancer with millions in compensation paid out. While compensation was given to those with higher levels of exposure (grounds keepers as an example), publications have shown that low levels of Glyphosate in the environment are associated with -

A) increased incidence of post-concussion syndrome due to impairment of brain resilience to recover from traumatically induced neuroinflammation (6)

B) Endocrine (hormonal) disruption in both humans and animals (7), (8), (9), leading to increased rates of metabolic syndrome (10)

C) Impairment of gastrointestinal integrity. Damage to intestinal barrier function due to Glyphosate (11) and resultant increased circulating levels of LPS (Lipopolysaccharide) causing TLR4 activation with resultant up regulation of TNF-alpha, and associated increased rates of non-alcoholic fatty liver are

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consistent with studies showing that for example, 88% of non-farming children had detectable levels of glyphosate in their urine. (12) not just the grounds keepers.

D) Increased levels of anxiety and depression. (13)

To name a few effects that immediately preclude the ability of FSANZ to accept this breed of corn based on their mandate to

Even more concerning is that – given Glyphosate is found in 70-88+% of the world's populations; research shows that this will affect future generations. It has been proven that Glyphosate causes epigenetic changes and that these are passed on through the human lineage meaning that FSANZ is needing to take responsibility for future generations to come (14).

While it could be argued that the use of the Glyphosate is at the seed production stage, this does not protect the workers who are going to still be exposed to this proven carcinogen.

3) The herbicide Fluazifop- p-butyl (FPB) has a clear role in causing changes in ascorbic acid and glutathione levels and glutathione-s-transferase levels in cells.(15) These are important as oxidative stress pathway intermediates/enzyme. It's now recognized that ascorbic acid, and glutathione levels are also critical regulators of epigenetic programming,(16) and they have an impact on maintaining the cellular identity and differentiation in tissues, and ultimately the rate of aging and degenerative changes, including metaplasia and neoplasia.(17)

More critically, in a world facing a long-term future of Covid-19 disease management, it is imperative that the population not have further reductions in glutathione levels through exposure to Fluazifop- p butyl (FPB) levels. Glutathione is known to be critical in lung health and outcomes in viral pneumonia. (18) Its critical nature is demonstrated in the published case report of patients experiencing resolution of Covid-19 symptoms when given Glutathione(19)

This submission has not even gone into the other agrichemicals potentially involved in the production of this corn. Dicamba for instance is extremely well known as a environmental and human toxin which has now been shown to be associated with cancer (20)

Given the above scientific evidence of harm, it is now evident that in order to demonstrate safety, the applicant would have to provide human studies of at least one generation showing safety through-out at least one life time of consumption in a population and actually measure the parameters above – rates of autism, metabolic disease, cancer, memory issues, neurological disease rates. This would need a very large interventional trial with people willing to under-go the experimental exposure to this food source in an informed consent process.

Further, the FSANZ Act is responsible for providing an and accountable regulatory framework and the provision of adequate information to consumers.

The effects of these agrichemicals are completely untestable on individuals presenting to their GP with illnesses known to be caused by these chemicals.

We are now able to measure Glyphosate levels in urine through overseas labs, knowledge that is virtually non-existent within the Australian and New Zealand population of General Practitioners as there is no training, either at the Medical School level, nor in continuing education; on methods to deduce underlying environmental aetiologies potentially involved in their patients diseases. Population studies would be difficult to do as chemical herbicide residues are already present in the diet. There would be no definitive way of tracking individual consumption rates of the novel food product proposed in this application to be

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able to make population incidence of consumption based related studies upon. This means that without specifically organized pre-release, long term feeding studies to allow for the known transgenerational effects, it would be extraordinarily difficult to make any assessment of the safety of MON 87429 once introduced for general consumer uptake and regardless, it is a requirement of the Act that this be demonstrated prior to acceptance.

Recommendation: That the application for approval of MON 87429 maize be rejected as the evidence of safety has not been provided by the applicant. This would require long term feeding studies to demonstrate that the combined and multiple chemical herbicides did not result in any of the diseases they have already been shown in animal and human studies to be associated with and or to cause.

FSANZ is ethico-legally bound by the Act to fulfil its responsibility to reject unsatisfactory applications. Application A1192 is unsatisfactory and there is evidence that MON 87429 even threatens to exacerbate deaths related to Covid-19.

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