

FISH HOEK VALLEY RATEPAYERS & RESIDENTS ASSOCIATION

(Incorporating Fish Hoek, Clovelly and Sun Valley)

P.O. Box 22125, Fish Hoek 7974
Web: www.fishhoekratepayers.com

TO: REGISTRAR: GENETICALLY MODIFIED ORGANISMS ACT
GMOAppComments@daff.gov.za

**SUBJECT: OBJECTION TO APPLICATION FOR THE GENERAL RELEASE OF
GENETICALLY MODIFIED MAIZE
DUE: 12 SEPTEMBER 2018**

1. DISCUSSION

Pioneer Hi-Bred RSA (Pty) Ltd is applying for the general release of genetically modified TC1507xNK603 maize from two genetically modified variants into the South African environment. The TC1507 Genetically Modified Organism (GMO) variant was modified to be resistant to Dow's glufosinate-ammonium herbicide and insects. The NK603 GMO variant is resistant to Monsanto's glyphosate (Round UP) weed killer. The general release application is intended to allow the planting of the new GMO maize in many commercial maize growing regions to use the SA environment as a testing ground to produce GM seeds which will not be commercially available. This application is to bulk up seed which will be sprayed with glufosinate-ammonium herbicide and Monsanto's glyphosate (Round Up) weed killer. The glufosinate-ammonium herbicide was developed due to increased frequency of glyphosate resistant weeds and has been found to cause convulsions and birth defects (brain damage).¹

It must be pointed out that South Africa is the only country in the world that allows GM varieties of its national staple food white maize to be grown commercially, whereas in California, USA, a Superior Court jury on 10 August 2018 found Monsanto liable in a lawsuit filed by a man who alleged the company's glyphosate-based weed-killers, including Roundup, caused his cancer and ordered the company to pay \$289 million in damages.² A judge has ordered the California Department of Food and Agriculture to stop using chemical pesticides. Monsanto's Roundup destroys healthy microbes in human stomachs. Honey bees are attracted to flowers laced with glyphosate that are likely harmful to their sustained health. New data released recently by the U.S. Food and Drug Administration (FDA) shows a rise in the occurrence of pesticide residues detected in thousands of samples of commonly consumed foods.³

The global population is approximately 7.6 billion and current food production is capable of feeding 14 billion people.⁴ There is no need for GMO when we currently have sufficient capacity to feed the world.

¹ <https://www.iatp.org/news/glufosinate-a-herbicide-used-with-genetically-modified-crops-ignored-side-effects>

² <https://www.reuters.com/article/us-monsanto-cancer-lawsuit/monsanto-ordered-to-pay-289-million-in-worlds-first-roundup-cancer-trial-idUSKBN1KV2HB>

³ <https://www.ecowatch.com/california-pesticides-health-2539988928.html>

⁴ <https://www.facebook.com/GMOFreeUSA/photos/a.468695639837571.108816.402058139834655/1944423592264761/?type=3&theater>

The Genetically Modified Organisms Act #15 of 1997 seeks to provide for measures to **promote the responsible** development, production, **use and application** of genetically modified organisms; to ensure that all activities involving the use of genetically modified organisms (including importation, production, release and distribution) shall be carried out in such a way as to **limit possible harmful consequences to the environment**; to give attention to the prevention of accidents and the effective management of waste; to establish common measures for the evaluation and **reduction of the potential risks** arising out of activities involving the use of genetically modified organisms; to lay down the necessary requirements and **criteria for risk assessments**; to establish a council for genetically modified organisms; to ensure that genetically modified organisms are appropriate and do not present a hazard to the environment; and to **establish appropriate procedures for the notification of specific activities** involving the use of genetically modified organisms; and to provide for matters connected therewith.⁵

Promote Responsible Use and Application of GMOs

There are seven giant seed and agro-chemical companies in the world with millions of smallholder farmers locked into buying from this monopoly block (as they are not “allowed” to collect and trade in their own seeds) and billions of us, dependent on what the food farmers grow. The commercialisation of the seed system threatens bio-diversity, food security and indigenous knowledge. The seeds from seed companies are sold along with the companies’ agri-chemicals products engineered to work specifically with the seeds. They promise higher yields and drought and pest resistant crops, but this has not always been fulfilled.⁶

Limit Possible Harmful Consequences to the Environment

It is false for the Department of Trade and Industry (DTI) to claim in their GMO Presentation on 13 September 2018, that GMO reduces the need for using pesticides. Pesticide usage has increased six to 18 times in the UK, not halved as claimed by the pesticide industry. New scientific evidence from around the world showed that very low doses of pesticides, well below official ‘safety’ levels, pose a significant risk to public health from pesticides in our food supply. It is well known that some toxic chemicals accumulate in the environment and in our bodies. Repeated doses, no matter how small, will build up over a lifetime. Real world multiple active ingredients and adjuvants cocktails applied to crops that may increase their potency, are not tested on humans.⁷

Reduction of the Potential Risks

Glyphosate has been described as carcinogenic for humans and harmful for animals. In Argentina, serious health issues in children are on the rise. There, incidents of cancer have tripled over the past 10 years. Congenital deformities in new-borns have quadrupled.⁸

A scientist, French Professor Gilles-Eric Seralini, who linked GMOs and glyphosate to cancerous tumour growth and significant chronic kidney deficiencies in rats concluded that GMOs are health damaging and unsafe for human consumption. Marc Fellous, former chairman of France's Biomolecular Engineering Commission (BEC), has been indicted for “forgery” for unauthorised copying of the signature of a non-consenting scientist regarding his statement that multiple GM crops are safe for human consumption. Independent organization CRIIGEN stated that alarming signs of toxicity were reported when GMOs and Roundup were used long-term. Monsanto lobbyists got the journal Food and Chemical Toxicology to retract Seralini’s long-term study linking GMOs and glyphosate to rat tumours. Seralini believes that endocrine disruptions and overexpression of EPSPS transgene or other mutational effects in

⁵ http://www.saflii.org/za/legis/num_act/gmoa1997286/

⁶ <https://www.dailymaverick.co.za/article/2017-12-15-food-security-planting-a-new-food-culture-of-contradictions/#.WjPfJE0UnIW>

⁷ <https://www.soilassociation.org/news/2017/november/rapid-increase-in-pesticide-use-and-new-evidence-of-health-impacts-of-very-low-doses/>

⁸ <http://www.dw.com/en/glyphosate-the-sick-children-of-argentina/av-41649212>

the GM maize are responsible for causing these issues.⁹ Toxic effects of glyphosate and its commercial formulations below regulatory recommended acceptable daily intake limits, cause teratogenic, tumorigenic and hepatorenal effects explained by endocrine disruption and oxidative stress.¹⁰

Criteria for Risk Assessments

In 2016 the World Health Organization deemed glyphosate a “probable human carcinogen”. A significant exposure to glyphosate in farm workers has been linked to increased risk of non-Hodgkin lymphoma, a type of cancer.¹¹

GMO foods have been linked with leaky gut syndrome, heightened food allergies (ex. gluten intolerance) and several inflammatory diseases. GMOs contain more pesticides than non-GMO foods, which possibly explains the increase in autoimmune diseases due to the higher toxic-burden.¹²

The widespread use of glyphosate has led to a sharp increase in glyphosate-resistant weeds. These “super-weeds” require even greater herbicide use and are often combated using older, more dangerous herbicides, such as 2, 4-D, a chemical that has been linked with non-Hodgkin’s lymphoma, Parkinson’s disease, endocrine disruption, and reproductive problems.¹³

Establish Appropriate Procedures for the Notification of Specific Activities

South Africa’s Department of Health (DOH) introduced labelling regulations under the Foodstuffs, Cosmetics and Disinfectants Act #54 of 1972’s and associated Regulation 25 in 2004, but this has proved to be inadequate. The Department of Trade and Industry’s (dti) Consumer Protection Act (CPA) #68 of 2008 and associated Regulation 293 states that ALL GM goods must be labelled, but these GM food labels are placed in the small ingredients table.¹⁴ We want larger labels and we want to know which pesticides have been used (active ingredients, frequency and last spray – the farmers know).

Think about it. Applicants like these allow someone to patent life. Can that be right? Also, we have to pay foreign companies for these seeds and herbicides where we could be selling our own heirloom seeds¹⁵ and using biologically produced “natural organic” herbicides¹⁶.

2. RECOMMENDATIONS

Therefore, it is recommended that for the reasons stated in this report, that:

Pioneer Hi-Bred RSA (Pty) Ltd’s application for the general release of genetically modified TC1507xNK603 maize, **BE DENIED**.

⁹ https://www.naturalnews.com/053378_Seralini_Monsanto_fraudulent_scientists.html

¹⁰ <http://www.sciencedirect.com/science/article/pii/S027869151530034X>

¹¹ <http://time.com/4295272/glyphosate-pesticide-roundup-hawaii-activists/>

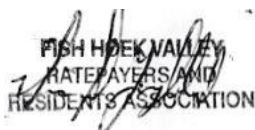
¹² <https://www.amymyersmd.com/2017/08/3-reasons-to-avoid-gmos-if-you-have-an-autoimmune-disease/>

¹³ <http://www.centerforfoodsafety.org/press-releases/3536/epa-approves-new-24-d-herbicide-blend-paving-way-for-controversial-ge-crops#showJoin>

¹⁴ <http://biosafety.org.za/information/know-the-basics/gmo-safety/the-labelling-of-gm-foods-in-south-africa>

¹⁵ http://www.organicseed.co.za/search?orderby=position&orderway=desc&search_query=soybean

¹⁶ <https://www.seedsforafrica.co.za/products/biogrow-finalsan-organic-plant-care-herbicide-moss-algae-killer-500-mls>

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SIGNATURE	
DATE	20 August 2018

Application for the General Release of genetically modified maize

Pioneer Hi-Bred RSA (Pty) Ltd (DuPont Pioneer), P.O. Box 8010, Centurion 0046; hereby informs the public about its intention to submit applications for general release of genetically modified TC1507xNK603 maize into the South African environment.

TC1507xNK603 maize has been produced by conventional breeding methods between progeny of two genetically modified maize events namely: TC1507 and NK603 maize. TC1507 maize was modified by the insertion of *cry1F* gene from *Bacillus thuringiensis* var. *aizawai* and a gene for phosphinothricin acetyltransferase (*pat*). TC1507 maize was obtained by biolistic transformation with PHI8999A insert deoxyribonucleic acid from plasmid PHP8999.

NK603 maize was modified by the insertion of two gene cassettes, each containing a glyphosate tolerant form of the enzyme 5-enolpyruvylshikimate-3-phosphate synthase (*cp4 epsps*) from *Agrobacterium* sp. strain CP4. NK603 maize was obtained by particle acceleration technology with the fragment PV-ZMGT32L created by digestion of plasmid PV ZMGT32 with *Mlu* I.

Expression of the Cry1F protein confers protection against certain lepidopteran maize pests. Expression of PAT and CP4 EPSPS proteins confer tolerance to glufosinate-ammonium and glyphosate herbicides, respectively.

TC1507xNK603 maize is not intended to be available commercially in South Africa but the general release application is intended to allow the planting of TC1507xNK603 in many commercial maize growing regions in South Africa for the purposes of research, development, and seed production.

All interested parties should submit comments or objections, in connection with the intended release, in writing to:

Registrar: Genetically Modified Organisms Act
Private Bag X973
Pretoria 0001
Fax No: 012 319 6298
E-mail: GMOAppComments@daff.gov.za

All comments or objections must be received within 30 days from publication of this notice.