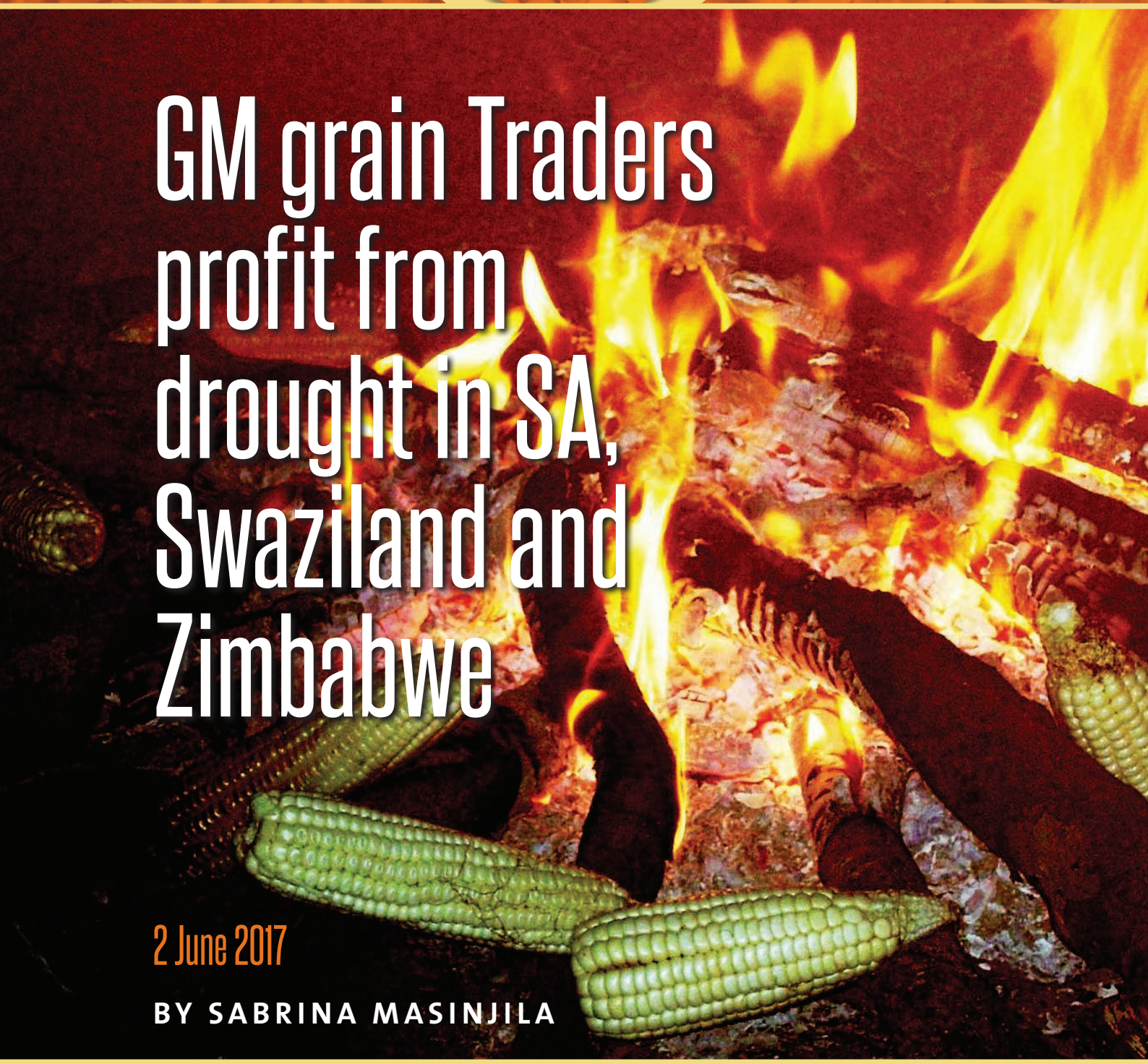
ALERT!



GM grain Traders profit from drought in SA, Swaziland and Zimbabwe

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BY SABRINA MASINJILA

african centre for biodiversity
www.acbio.org.za

The African Centre for Biodiversity (ACB) monitors the export to and from SA of GMOs. During 2016, South Africa and neighbouring countries experienced severe drought, which led to lower maize crop cultivation and yields. Consequently and according to the Department of Agriculture's website, for the period of January to April 2017, South Africa imported just over 2.4 million MT of GM maize from Argentina, Brazil and the USA for food, feed and processing (commodity use). Just over half of these imports came from the USA (almost 1.4 million MT). These huge shipments were the largest GM maize imports into the country since 2004.

Due to the drought, South Africa began importing GM maize from the USA for the first time in December 2016, with just under 1 million MTs being imported by just 3 companies – Engelhart CTP and global giants Cargill and Louis Dreyfus. Historically South Africa has not imported GM maize from the USA for commodity use because farmers in the US cultivate GM maize events (varieties) that are not approved in South Africa for commercial growing. South Africa has a zero tolerance for unapproved GMOs.

In 2017 the majority of imports from the USA have come through the following traders in relatively small amounts at a time – Cofco, Afgri, Comdi, RCL, Meadow, de Heues, Vinci Trading, Crown chicken, Grainvest, Africum and ECTP[i], with Pioneer, Bunge and Louis Dreyfuss bringing in larger shipments from the USA. Bunge dominates the imports coming from Argentina and Brazil; bringing in bigger bulk shipments. Bulk shipments from USA, Argentina and Brazil all uniformly list the shipments as containing the following GM maize varieties or events: MON810 x Bt11 x NK603 x MON810 x NK603, MON89034, MON89034xNK603. All of these traits, except for Bt11, which belong to Syngenta, belong to Monsanto and are combinations of stacked events of insect resistance and herbicide tolerant traits.[ii]

South Africa in turn has exported to Zimbabwe and Swaziland several shipments of GM maize totaling 60,500 MT and 7,500 MT respectively, see table below. The grain traders involved in this trade (gaining export permits) to Zimbabwe and Swaziland so far this year are ADM and ETC (Zimbabwe) and ETC and TWK (Swaziland). GM varieties or events listed in these bulk shipments are the same as those being imported: MON810 x Bt11 x NK603 x MON810 x NK603, MON89034, MON89034xNK603 and NK603, as well as MON810, BT11 and MON810 x NK603.

Biosafety risks and staple food in Southern Africa

MON 810 and Bt 11 both contain Bt protein, Cry1Ab that targets certain members of the lepidopteran family (moths and butterflies), while MON89034 is a stacked Bt crop containing two Bt toxins, Cry2Ab2 and Cry1A.105. Bt insecticidal toxins are isolated from the bacterium *Bacillus thuringiensis*. Independent studies such as Aris *et al*. 2011 have revealed that Bt toxins can survive digestion in humans, being detected in the blood stream of pregnant Canadian women and the fetal blood supply.

i. In December 2016 it was reported that by the end of April 2017 an estimated 300 000 tonnes of GM white maize from the US and 500 000 tonnes of yellow maize would be imported. http://www.fin24.com/Companies/Agribusiness/sa-to-import-gm-maize-for-first-time-from-us-20161206

ii. While MON 810 has come off patent, the materials that are used to prepare for authorisations are proprietary and therefore even if the patent has expired, control over this proprietary information (studies, dossiers, data, submissions for approval etc.) gives the original patent holder continuing power to ask for compensation and payment for these materials that are required to use the GM event.

On the other hand, NK603 confers tolerance to the herbicide glyphosate. Glyphosate has been linked to birth defects, neurological disease, kidney and liver damage is deeply controversial since the WHO International Association for Research into Cancer (IARC) categorised it as a class 2A carcinogen in May 2015. Stacked events pose great risks as they include different traits combined in one crop. There are huge concerns around the possibility of adverse effects from influences of one gene on another, occurring in stacked maize varieties. A study conducted by Agapito-Tenfen et al in 2014 detected 22 proteins that were differently expressed between single trait events and stacked GM events on the same genetic background[1].

Socio-economic impacts of GM imports

Most Southern African countries require that GM grain imports, especially maize, be milled at the point of entry. However, this cost is often pushed onto the consumers. In Swaziland for example, the National Milling Corporation (NMC), a parastatal, usually sells imported maize to millers at a price it determines, while the millers in turn determine the prices to charge consumers for maize meal. With the millers and the NMC controlling the market, the maize meal prices are too high for poor households to afford, which is sometimes four times the price charged to millers by NMC for grain[2]. Furthermore, it is usually difficult to monitor the trade of GMOs in the region, given the porosity of the regional borders and alleged corruption. According to research carried out by CTDT in the SADC region, GM maize found in farmers' fields ranged from 10 to 35%. This is an astonishingly high level of contamination.[iii]

In Zimbabwe there are a different set of dynamics and impacts. These imports are harming the country's ability to boost local production, as small-scale farmers have to compete with dumped cheap South African GM maize. Early this year, the Grain Millers Association of Zimbabwe, which represents the country's major milling companies, asked the government to impose a 40% tariff on imports of maize and maize meal from South Africa[3]. Higher volumes of GM maize from South Africa expected this season

During the 2016/17 season, South African maize production has made a remarkable recovery, producing an expected 14.5 million tonnes harvest, which is well above an average production of 12.5 million tonnes in a normal season. After being a net importer of maize for the past 2 seasons, South Africa is now searching for new markets to dispose of the largest maize export volume in 2 decades. (2.7 million tonnes surplus consists of 52% white and 48% yellow). Potential export markets include Japan, Taiwan, the United Arab Emirates, Thailand, Zimbabwe, Indonesia, Malaysia, Saudi Arabia, Mauritius, Iran, the Democratic Republic of Congo and Yemen. White maize prices in East Africa are reportedly trebling the current prices listed on the JSE[4].

Call to action

The ACB calls on like-minded activists in Swaziland and Zimbabwe to follow up with their governments on these shipments to ensure that the maize imports are milled as required, and that they do not find their way onto farmers' fields. Furthermore, caution should be taken when it comes to the importation of the insect resistant and herbicide tolerant maize events including

iii. Personal communication via email

their stacked versions due to associated human health risks. However, the main issue here is urgency for African governments to support the ability of farmers to produce diverse crops, in a healthy and sustainable way, to address their dietary and nutritional needs within a socially just and ecologically sustainable manner.

Table: Imports and Exports of GM maize approved by the Executive Council: GMO Act for the period January to April 2017

Country	Applicant	Supplier	Purpose	Tonnes
January				
South Africa	Cofco	USA	Commodity Use	400 000MT
	Pioneer	USA	Commodity Use	300 000MT
	Rayner	Argentina	Commodity Use	200MT
	Pimankus	Argentina	Commodity Use	700MT
Zimbabwe	ETC	South Africa	Commodity Use	50 000 MT
February				
South Africa	Rayner	Argentina	Commodity Use	100MT
	Pioneer	USA	Commodity Use	300 000MT
	Afgri	USA	Commodity Use	21 000MT
	Ameropa	Argentina	Commodity Use	35 000MT
	Comdi	USA	Commodity Use	2 700MT
	Bunge	Argentina Brazil	Commodity Use Commodity Use	500 000MT 500 000MT
	RCL	USA	Commodity Use	24 000MT
	Meadow	USA	Commodity Use	19 000MT
Zimbabwe	ETC	South Africa	Commodity Use	2 500MT
March				
South Africa	De heus	USA	Commodity Use	4 500MT
	Meadow	USA	Commodity Use	4 000MT
	Vinci Trading	USA	Commodity Use	400MT
	Crown Chicken	USA	Commodity Use	14 000MT
	Bunge	USA	Commodity Use	200MT
	Louis Dreyfus	USA	Commodity Use	300 000MT
	Grainvest	USA	Commodity Use	600MT
	Africum	USA	Commodity Use	1 000MT
	ECTP	USA	Commodity Use	4 500MT
	Cofco	USA	Commodity Use	1 000MT
Swaziland	ETC	South Africa	Commodity Use	3 000MT
Zimbabwe	ADM	South Africa	Commodity Use	5 500MT
	ETC	South Africa	Commodity Use	2 500MT
April				
Swaziland	ETC	South Africa	Commodity Use	3 000MT
	TWK	South Africa	Commodity Use	1 000MT

Source; Department of Agriculture, Forestry and Fisheries https://goo.gl/PD7yr4

For GMO permit lists, issued by the Department of Agriculture, follow the link to the Department's website, then click on divisions / biosafety / information / permits issued.
http://www.daff.gov.za/

Endnotes

1 ACB's Objection to Monsanto's application for an extension permit of drought tolerant GM Maize hybrids
2 http://www.fao.org/docrep/008/J5512e/J5512e00.htm
3 https://goo.gl/R5Kx0p
4 http://www.fin24.com/Companies/Agribusiness/all-not-rosy-for-sa-maize-exports-expert-20170526