

# A Good neighbour? South Africa forcing GM maize onto African markets and policy makers

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The African Centre for Biosafety (ACB) is a non-profit organisation, based in Johannesburg, South Africa. It provides authoritative, credible, relevant and current information, research and policy analysis on genetic engineering, biosafety, biopiracy, agrofuels and the Green Revolution push in Africa.

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## ACRONYMS

AATF	African Agricultural Technology Foundation
ACB	African Centre for Biosafety
ACTESA	Alliance for Commodity Trade in Eastern and Southern Africa (COMESA)
AGRA	Alliance for a Green Revolution in Africa
BCH	Biosafety Clearing House
BSP	Biosafety Protocol
CEC	Crop Estimates Committee
COMESA	Common Market for Eastern and Southern Africa
DAFF	Department of Agriculture, Fisheries and Food
DEFRA	Department of Environment, Food and Rural Affairs (UK)
DTI	Department of Trade and Industry
EAC	East African Community
EAGC	East African Grains Council
FTA	Free Trade Area
GATT	General Agreement on Tariffs and Trade
GMO	Genetically Modified Organism
IFAD	International Fund for Agricultural Development
ISAAA	International Service for the Acquisition of Agri-biotech Applications
KEPHIS	Kenyan Plant Health Inspectorate Services
MT	Metric Ton
RATIN	Regional Agricultural Trade Intelligence Network
SADC	Southern African Development Community
SPS	Sanitary and Phyto-Sanitary agreement
UN FAO	United Nations Food and Agricultural Organisation
UNEP-GEF	United Nations Environment Programme - Global Environmental Facility
WFP	World Food Programme

## EXECUTIVE SUMMARY

Since the beginning of 2010, South Africa's Executive Council responsible for GMO permit approvals has granted export permits for almost 300,000 Metric Tons (MT) of GM maize to be exported to Kenya, Mozambique, and Swaziland collectively, and 35,000 MT of GM soybean to Mozambique.<sup>1</sup> Despite South Africa being Africa's largest producer of maize, and a regular exporter of non-GM maize or maize containing only adventitious<sup>i</sup> GM maize to African countries, these export permits are the first cases of outright commodity exports of GM maize from South Africa to other African countries.

The latest available figures from the Department of Agriculture indicate that South Africa's maize harvest for the crop year 2009/2010 is over 13 million MT, the second highest ever recorded.<sup>2</sup> While it is impossible to pin-point exactly how much of this maize is GM, and industry sponsored statistics such as those from the Maize Trust or the International Service for the Acquisition of Agri-biotech Applications (ISAAA) need to be viewed with caution, other sources state that approximately 52% of maize seed sales in 2008/09 were GM.<sup>3</sup> This indicates a glut of GM maize on the South Africa market, and a desperate need to find new export markets to channel this to.

For much of the last decade South Africa has imported millions of tons of GM maize from Argentina, predominantly for animal feed, and exported only GM maize seeds (mostly to the Philippines). While sporadic one-off commodity exports have gone to Japan, Malaysia and Iran since 2005, both the number of permits issued and the volumes exported so far this year (2010) easily exceed anything that has been exported before.<sup>4</sup>

South Africa's exports coincide with increased maize production in the recipient countries over the last few years. In the case of Kenya, remaining shortfalls could be relieved through trade within East Africa, without the inherent risks involved in importing GMOs into a region where the capacity to adequately monitor and manage them is either non-existent or hopelessly inadequate.

South Africa has had biosafety legislation in place (in the form of the GMO Act: 1997) since 1999.<sup>5</sup> Kenya and Swaziland have yet to fully implement their own biosafety laws, though they are both currently at a fairly advanced stage with vigorous debate on the law already underway in the Kenyan parliament, and in the offing in Swaziland. Pending Swaziland's legislation becoming officially operational it has already officially rejected an inbound consignment of GMOs in writing to the South African GMO Registrar.<sup>6</sup> It thus remains a mystery as to what transpired to change their minds so as to allow South Africa to issue an export permit for the GM maize.

Following public outcry in Kenya over the shipments, the Kenyan government was forced into releasing a public statement in which it categorically denied that it had been adequately informed that the shipments contained GMOs.<sup>7</sup> This is just the latest in a series of sordid incidents involving the GM maize trade between the two countries that seriously undermine any claims

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i. Containing GMOs that have been included by chance contamination.

that merely dumping excess GM production on countries will lead to sustainable improvements in food security and poverty alleviation. It also calls into question the Biosafety regulatory system operating in South Africa, particularly vis-à-vis its other African counterparts who do not yet have Biosafety regimes in place.

## INTRODUCTION

On the 14th of April 2010, the Business Report announced that according to the latest data from the Crop Estimates Committee (CEC), South Africa's maize harvest for 2009/10 would be 12.9 million Metric Tons (MT) (this figure has subsequently been revised upwards to 13.1 million), leaving a potential exportable surplus of 6 million tons.<sup>8</sup> This announcement briskly followed the discovery that during January and February 2010<sup>ii</sup> the South African GMO authorities had granted French multinational grain trader Louis Dreyfus permits to export a staggering 280,000 tons of GM maize to Kenya, as well as permits equal to 3,000 MT to other grain traders for export to Swaziland. In early May a further 11,000 MT of GM maize was given the thumbs up to be exported to Mozambique, together with 35,000 MT of GM soybeans.

The strategic importance of Kenya to the biotech industry cannot be overstated. Both the African Agricultural Technology Foundation (AATF) and the Alliance for a Green Revolution in Africa (AGRA) have their head offices in Nairobi. In the early 1990s, when Monsanto was first making overtures to Africa (in collaboration with USAID), it was the Kenyan Agricultural Research Institute (KARI) that was chosen as their conduit.<sup>9</sup> The East African Grains Council (EAGC), founded in June 2007 to regionally coordinate grain markets, is another USAID funded programme based in Nairobi.<sup>10</sup>

## MAIZE PLANTING, PRODUCTION AND YIELD IN SOUTH AFRICA

The latest figures from the Crop Estimates Committee (released on the 22nd of April 2010) forecast a total maize crop of 13.1 million<sup>11</sup> tons, up from a first forecast of 12.8 million tons made on the 23rd of February 2010. According to Loffie Brandt, head of agricultural information at Absa agribusiness, this is the second largest maize harvest ever recorded in South Africa.<sup>12</sup> The expected average yield is 4.78 tons per ha, slightly down from their final yield estimate of 4.84 tons per ha for 2008/09.<sup>13</sup> This followed drastic yield reductions recorded in 2006/07, particularly in Mpumalanga (where average yields had dropped by 2 ton/ha over the previous year), the Free State and North West Province (where yield dropped by approximately 1 ton/ha). Since the 2000/01 cropping season maize yields in South Africa have been sporadic. The three cropping years at the beginning of this period saw yields of above 9 million MT (based on yield per ha of 2.8 – 3.23 MT), which rose to nearly 11.5 MT in 2004/05, before falling again for the following 2 years to 6.6 and 7.1 million MT respectively. Since 2007/08 the annual total maize harvest in South Africa has remained above 12 million MT. Maize yields have remained above 4 tons per ha in every year bar one (2006/07) since 2004/05.<sup>14</sup>

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ii. The exact date is impossible to verify owing to the sporadic manner in which the Department of Agriculture, Forestry and Fisheries publishes its data

The total planted maize area in 2009/10 is 2.7 million ha, up from 2.4 million in 2008/09.<sup>15</sup> The largest planted areas by province are: Free State (1.16 million ha), North West (775,000) and Mpumalanga (482,000).<sup>16</sup> It is difficult to verify how much of this area was planted with GM maize. According to a survey by the Maize Trust, more than 70% of SA's total maize plantings were GM in 2009/10.<sup>17</sup> However, the African Centre for Biosafety has previously urged caution when viewing GM statistics from this body, as the figures are extrapolated from seed orders and 'the intention to plant'.<sup>18</sup> According to the South African National Seed Organization (SANSOR), GM accounted for 52% of maize seed sales in 2008/09 (17,559.13 tons).<sup>19</sup> This compares to 42% in 2007/08,<sup>20</sup> and 36% in 2006/07.<sup>21</sup> There are no figures yet available for the current crop year, though according to one expert in the field, the GM planted area for maize increased by 6% this year over last.<sup>22</sup>

For the twelve months ending June 2009 the consumer price index (CPI) for grain products increased by 25.5%, with human cereal consumption jumping by over 500,000 MT over the same period. This increase was caused mainly by the sharp rise in maize-meal consumption in South Africa and neighbouring countries, due to sharp increases in living expenses. Feed consumption is also expected to increase by approximately 500,000 MT over next 3 years due to increased meat consumption, associated with increased affluence. The Per capita consumption of maize increased from 75kg to 88kg during 2008, but is expected to fall back to 80 kg as economic conditions improve.<sup>23</sup>

## SOUTH AFRICAN MAIZE EXPORTS

South African agricultural exports to the Southern African Development Community (SADC) rose by 170%, from R4.5 billion to R12.5 billion between 2007/08 and 2008/09 due to high exports of maize, sugar and sunflower seed. Production of field crops is expected to decrease slightly because profit margins have closed down with rapid increases in input costs. A general shift away from maize to sunflower seed and soya beans has occurred as a result of the increase in oilseed prices outpacing maize and wheat price increases for the year ending 30th June 2009. The gross income from maize exports was R18.3 billion, a 44% increase on the previous 12 months.<sup>24</sup>

In 2008/09 South Africa's maize exports were worth R6.3 billion. Zimbabwe, Kenya, and Mozambique are the country's largest agricultural trade partners in respect of South African imports.<sup>25</sup> During 2009 South Africa exported 1.66 million MT of maize (maize for food, feed and as seed) compared to 1.08 million MT in 2008. Of this 1.12 million went to Kenya; 262,768 to Zimbabwe; 81,055 to Mozambique and 52,617 to Zambia. The 1.12 million MT exported to Kenya during 2009 was nearly double the entire exported volume for the preceding nine years.<sup>26</sup> Figures from the South African Grain Information Service (SAGIS) for May 2009 to February 2010 showed maize exports of 830,000 MT,<sup>27</sup> hinting that Kenya has been earmarked as a regular recipient of surplus South African maize, whether it be GMO or conventional.

Following the record crop announcements, South African Minister of Agriculture Tina Joemat-Pettersson announced that the country had secured markets to sell up to 4 million MT of surplus maize, which included Kenya, Egypt, the International Fund for Agricultural Development (IFAD), the Food and Agricultural Organisation (FAO), and the World Food Programme (WFP).<sup>28</sup>

## SOUTH AFRICA'S GM MAIZE IMPORTS AND EXPORTS

This year has already seen some significant developments in South Africa's trade in GM maize. In January 2010, for the first time since 2008, permits were granted for import of 55,000 MT of GM maize from Brazil including 25,000 MT classified as 'commodity clearance'.<sup>29</sup> Export patterns also appear to have radically shifted. In addition to the 280,000 MT exported to Kenya, over 11,000 MT of commodity exports have been granted to Mozambique, and a small shipment of 3,000 MT has already been refused entry into Swaziland.<sup>30</sup> These are the first known 'official cases'<sup>iii</sup> of GM maize exports from South Africa to other African countries for use as food, feed and processing.

As all three destination countries have yet to fully implement their own biosafety laws, this leaves them at the mercy of the Cartagena Protocol on Biosafety (BSP), which owing to concessions made during its negotiation, has very little jurisdiction over the trade in bulk shipments of GMOs traded for the purposes of food, feed and processing. **As long as South Africa has approved the GM varieties and complied with its obligations to place certain prescribed information on the Biosafety Clearing House in terms of Article 11 (1) of the BSP, any country that is a Party to the Protocol can in fact import shipments without going through any biosafety risk assessment and approval processes,** even where their national legislation has not yet come into effect.

While there were no commodity imports of maize into South Africa during 2009, between 2001 and 2008, over 6.6 million MT of commodity imports were recorded (the vast majority of which came from Argentina, including over 3.3 million MT for the years 2006 and 2007). Up until 2005, the amount of GM maize exported by South Africa was minimal (less than 250 MT), most of which was seeds for planting in the receiving countries. Since 2005, exports for planting have increased considerably, to over 13,000 MT, the principle destination being the Philippines. Commodity exports have been rather more sporadic over the same period: In 2005 a single shipment of 90,000 MT was exported to Japan, while in 2008 commodity exports topped 203,000 MT (106,000 to Iran and 97,000 to Malaysia). No commodity exports were recorded in 2009, though 156,000 MT were imported for planting. The commodity export permits granted so far this year (or the commodity exports that have been made public so far this year) not only surpass anything that has gone before on volume, but also on the number of permits granted. The previous large quantities were all exported under single permits. This year the nearly 300,000 MT that has been authorised for export to African countries is spread over 22 separate permits.<sup>31</sup>

As if further proof were needed as to the bizarre logic underpinning the international trade in GMOs, during the course of our research, the ACB learned of an application by Monsanto for the right to import massive quantities of its highly controversial new eight-gene stacked GM maize, Smartstax.<sup>iv</sup> Monsanto's predictions that it would triple its 2007 profits by 2012 were based on the perceived success of Smartstax in the United States. However, sales have so far been disappointing,<sup>32</sup> and it now seems that Monsanto is trying to cut its losses by finding new markets for Smartstax in South Africa, in spite of its record harvest!

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iii. As will be described in greater detail later, illegal shipments of GM maize into Kenya have been reported since 2008.

iv. For more information on Smartstax and gene stacking please refer to the ACB publication 'The GM stacked gene revolution: A biosafety nightmare'.  
<http://www.biosafetyafrica.net/index.html/index.php/20100304290/The-GM-stacked-gene-revolution-A-biosafety-nightmare/menu-id-100026.html>



## GM SOYA TRADE IN SOUTH AFRICA

The principle use for soybeans is for protein animal feed. The commodity export of 35,000 MT of GM soybeans to Mozambique is the first such permit authorised by the Executive Council in South Africa. The soybean industry in South Africa is dominated by imports. In the case of soy cake and soy oil, the volume of imports is almost 12 times that of domestic production. Almost two thirds of soy imports are from Latin America, where GM accounts for almost all production. Domestic production in 2007/08 was 282,000 MT, with a gross value of R1.3billion (this was less than 1% of the total value of agricultural output). According to the South African National Seed Association (SANSOR), 88% of all soya seed sales in 2008 were GM.<sup>33</sup>

## SOUTH AFRICA'S OBLIGATIONS UNDER THE BSP

South Africa became a Party to the Cartagena Protocol on Biosafety (BSP) on the 11th of November, 2003.<sup>34</sup> The BSP states that 'A party that makes a final decision regarding domestic use, including placing on the market, of a living modified organism that may be subject to transboundary movement for direct use as food or feed, or for processing shall, within fifteen days of making that decision, inform the Parties through the Biosafety Clearing House (BCH). This information shall contain, at a minimum, the information specified in Annex II.'<sup>35</sup> The four GM maize events cleared for export by the Executive Council: GMO Act were: BT11, MON810, NK603, MON810 x NK603.<sup>36</sup>

According to the BCH, the first three events were cleared for general release, under the simplified procedure (article 13 of the BSP) in July 2007. Stacked event MON 810 x NK603 was granted conditional general release in South Africa in January 2007, which was triggered by a request for a trans-boundary movement of the event into the country. By providing links to other records on the BCH, South Africa is only fulfilling the bare minimum requirements under the BSP. It is worth noting that South Africa, being one of the world's largest producers of GMOs, and the only country in the world to grow GMOs that are a staple food, has yet to submit a single safety assessment of its own to the BCH.<sup>37</sup>

The African Centre for Biosafety has previously written to both the South African Minister of Agriculture and the Compliance Committee of the Cartagena Protocol on Biosafety, complaining in the strongest possible terms, as to the lackluster manner in which South Africa is fulfilling its obligations under the BSP. In our complaint we noted that since the Cartagena Protocol entered into force, the South African government has granted 1521 permits regarding GMOs (this has since risen to nearly 2,000), yet has only placed 13 notices on the central Biosafety Clearing House (BCH) website.<sup>38</sup>

## REGIONAL TRADE, MAIZE AND THE GM DEBACLE

Eastern and Southern Africa host three important regional blocs: The Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), and the Southern African Development Community (SADC). All three are currently phasing in their own customs unions.<sup>v</sup> As some states are members of more than one regional bloc, it is not possible for them to join more than one customs union (unless the tariffs are the same in both).<sup>39</sup> Efforts have been underway to harmonise the three regional areas following a heads of state meeting in Kampala in October 2008, with a view to launching a 'Tripartite FTA' between the three blocs by January 2012.<sup>40</sup>

Kenya is the economic powerhouse of East Africa, accounting for 45.9% of the regions GDP in 2008. By 2007 the US\$ 1.2 billion export revenue generated by Kenya's lucrative horticultural industry had exceeded the national revenue from tourism. Although the European Union is Kenya's primary export market, Kenya is at the centre of a large regional value chain, importing raw materials from neighbouring countries and re-exporting them as processed goods (quite often through Kenyan supermarket chains that are expanding their operations into the region). The Tanzanian trade ministry estimates that Kenya's exports to Tanzania are six times higher than Tanzania's to Kenya.

Agricultural trade volumes in East Africa are extremely difficult to judge as, by some estimates, up to 80% of all trade in agricultural produce and food in the region is done informally and not statistically recorded. Limited efforts at monitoring informal trade have been established, and it is estimated that between January and July 2009, 170,000 MT of maize was informally imported into Kenya from Tanzania and Uganda.<sup>41</sup> In the East African Community (EAC) tariff barriers to the cross border trade in grains were eliminated five years ago, when the region started implementing its customs protocol. Kenya's finance ministry declined to extend the duty free maize import programme, citing the larger than expected short season maize harvest.<sup>42</sup>

According to the African Investor, if non-tariff barriers are removed on grain movement in the East African Community (EAC), Kenya could bridge its production shortfall with imports through formal and informal channels from Uganda and Tanzania. However, Tanzania banned cereal exports through her formal channels in 2008, in response to the global food price hikes, leaving Uganda's short season harvests as the only grains that can be freely traded in the region. Kenya may have to apply to the EAC secretariat for another duty exemption to import maize from outside of its area. Malawi and Zambia, which are both COMESA members, can export Maize to Kenya at a 25% duty, whereas South Africa would have to pay 50%.<sup>43</sup>

### Kenya

During 2008, maize seed exported to Kenya from South Africa was found to be contaminated with MON810, which has still not been approved in Kenya. Under article 25.3 of the BSP, any illegal transboundary movements of LMOs should be reported on the Biosafety Clearing House.<sup>44</sup> However, there is still no mention of this contamination on the web portal.<sup>45</sup> A recent report

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v. The COMESA customs union came into force in June 2009, the EAC in 2005, while the SADC Free Trade Area was launched in 2008.

by the Kenyan Plant Health Inspectorate Service (KEPHIS) has revealed that between 2008 and 2009, 5 of 11 vessels that brought maize to Mombasa's port contained GMOs.<sup>46</sup>

Adding to the present confusion around the status of the latest GM maize exports to Kenya have been the conflicting statements emanating from the relevant government bodies in both countries. On the 21st of April, the South African Department of Agriculture, Forestry and Fisheries claimed, in a media release, that they had approved 240,000 MT of GM maize for export, and that the Kenyan government authorities had given authorization for this.<sup>47</sup> In response to this, the KEPHIS released a counter statement through a national newspaper in Kenya, stating that the required certificate of analysis required with any GMO import into Kenya was not present with the consignment in question.<sup>48</sup>

Current national maize supply in Kenya is estimated at one million metric tons. The national output for the July 2009 – June 2010 marketing year is expected to be 2.4 million tons, compared to the short term average of 3 million tons. The shortfall should be filled by cross-border and overseas imports. The Kenyan government is currently in the process of extending the duty waiver on maize imports up to June 2010.<sup>49</sup>

The short-rains maize crop has just been harvested, and a bumper crop of 540,000 tons is expected. Together with falling prices, this has reduced the number of people estimated to be moderately to highly food insecure from 3.8 million in 2008/09, to 1.6 million in the current agricultural year.<sup>50</sup> The latest maize prices from the Regional Agricultural Trade Intelligence Network (RATIN), a think-tank run by the East African Grains Council (EAGC), had maize trading at US\$ 183/ton in Nairobi during May 2010, down from US\$ 401 in December 2009, and its lowest price since November 2005.<sup>51</sup>

The maize trade between South Africa and Kenya has been plagued by scandal in the past. A recent PricewaterhouseCoopers forensic audit of Afgri Trading (Pty), a major South African grain trader, has recommended criminal investigations into cases of alleged fraud and corruption involved in the procurement of maize by the Kenyan government in 2008. In the wake of the post 2008 election violence, which left thousands dead and thousands more displaced, a Kenyan delegation visited the company's headquarters in South Africa to secure shipments of maize to Kenya. Following the forensic audit, it became clear to the investigators that the first contract was awarded without an official tender process, and that subsequent figures on the official audit were tampered with to cover this up.<sup>52</sup>

Further, damning evidence has emerged of brazen profiteering on the maize shipments, which were ostensibly made to alleviate the dire food security situation on the ground in Kenya. On the 31st of July, with the market price of white maize at approximately \$US 250 per ton (and on a downward trajectory), the Kenyan's were offered 60,000 tons at US\$ 452, netting Afgri an increased profit of around US\$ 24 million. The decision to send the shipment via Maputo rather than Durban added significantly to this cost, though Afgri's explanation that Durban lacked shipping capacity at the time has been thoroughly discredited. Noseweek, having spoken to independent grain exporters on the issue, came to a rather different conclusion. Far from lacking capacity, Durban actually has a high grain loading capacity, and vigorous safety checks that prevent contaminated shipments leaving South Africa's shores. The fact that over 6,000 of the initial 18,000 ton shipment via Maputo was discovered only upon reaching Kenya to be contaminated by aluminium phosphide, which can become highly toxic if handled incorrectly, suggests prior knowledge of the contamination, and that the chances of detection were much lower in Maputo.<sup>53</sup>

## Mozambique

Mozambique ratified the BSP in December 2001, and established the inter-disciplinary National Biosafety Working Group (GIIBS) to co-ordinate biosafety activities in the country. With financial backing from the UN Environment Programme's Global Environmental Facility (UNEP-GEF), a draft biosafety law was drawn up in 2005. Under article 5 of the draft bill, relating to the import of GMOs and their products for food, feed and processing, all imports are subject to approval from the Ministry of Agriculture. However, under the glossary of terms it is stated that the Ministry of Agriculture shall carry out these duties 'without prejudice to the competences of the Ministry of Industry and Trade related to external commerce operations to and from Mozambique.'<sup>54</sup>

Credence is also given to other international agreements and treaties that Mozambique is either a Party, or in the process of becoming a Party to. The document makes it clear that among the most significant of these are the General Agreement on Tariffs and Trade (GATT), Sanitary and Phyto-Sanitary (SPS) agreement, and the SADC Protocol on Trade. These statements further muddy the waters as to whether the final result of Mozambique's biosafety framework will truly be driven by the precautionary principle, or will merely facilitate the entry into the country of millions of tons of GM commodities. The objective of the SADC Protocol on Trade is to 'establish a free trade area in the SADC region', with sanitary and phyto-sanitary standards based on international standards.<sup>55</sup> Considering the self-acknowledged lack of biosafety capacity in the region, exactly who is driving the harmonization of these standards is a crucial question. That is beyond the scope of this paper, but attention should be drawn to previous concerns we have raised about the potential manipulation of the biosafety harmonization drive within African regional economic groupings.<sup>56</sup>

The latest figures from the FAO show that maize production for 2009 in Mozambique was 1.9 million MT, a 13% increase on 2008, and over 400,000 MT more than the recorded 2004 – 2008 average. However, the 2009/10 maize crop has been severely affected by a dry spell in the principle maize growing regions since mid December. A reduction in output is anticipated, though the 1st crop production forecast was not available at the time of writing. The expectation of a poorer harvest in 2010 has resulted in rising maize prices since the end of 2009, with prices in Maputo rising 26%, while the north of the country has seen a 25% increase over this period.<sup>57</sup> USAID predicts that the most acutely felt affects of this can be mitigated by favourable growing conditions for the shorter second season crop, which is harvested from August to October.<sup>58</sup>

Up until now, Mozambique has been associated more with the industrial agrofuel push into Africa. However, its close proximity to South Africa, coupled with its tariff free access to Europe and China make it a highly coveted market for a wide variety of actors. Shortly after it had gained approval to export over 11,000 MT of GM maize to Mozambique, South African grain trader Afgri publically announced that it was looking to expand its business activities in Mozambique.<sup>59</sup>

## Swaziland

On the 26th of January the Executive director of the Swaziland Environment Authority wrote to the South African GMO registrar informing her that the consignment of GM maize that had been granted an export permit to Swaziland would not be permitted to enter the country.<sup>60</sup> Despite the fact that export permits must have been granted on the 26th of January at the very latest, the information was not made public, through the Department of Agriculture's GMO permit list, until after the 16th of March.

Part of the consignment was designated as food aid, to which the authorities in Swaziland responded that the maize must be milled before entering the country. To date no further correspondence on the issue of GM food aid has been received. Several milling companies have requested the right to import GM food aid into Swaziland. These companies all originate from South Africa, and have submitted risk assessments for review in this regard. Swaziland faces maize shortages, especially for animal feed, with the shortfall made up by imports from South Africa. While the Swazi authorities do not allow the importation of GMOs, the fact that South African silos do not separate GM from non-GM maize makes this extremely difficult to implement. There are ongoing discussions between the relevant authorities in both countries as to how to resolve this issue.<sup>61</sup>

According to the latest food security report from the UN Food and Agricultural Organisation (FAO), Swaziland's maize production for 2009 was 71,000 tons, an 11% increase on the 2004-2008 average. In addition, the outlook for the 2010 maize crop is seen as 'mostly favourable'. In spite of this, approximately 20% of the population are facing food deficits for 2009/10. The FAO estimates that Swaziland will have to import 124,000 tons of cereals for the marketing year 2009/10, most of which will be maize. The situation has been severely exacerbated by the global economic downturn, which has curtailed remittance flows from South Africa to Swaziland.<sup>62</sup>

The ACB (at the behest of civil society groups within the country) has previously commented on the draft biosafety bill of Swaziland. Some of our key concerns relating to the bill included, but were not limited to: the generally supportive approach of the draft policy towards the introduction of GMOs into Swaziland; several glaring loop-holes to circumnavigate vigorous safety assessments, particularly relating to bulk commodity imports of GMOs into the country<sup>vi</sup>; and no clear mandate towards labeling.<sup>63</sup> Despite no such records appearing on the SA Department of Agriculture website, according to a member of the Swaziland environment authority, South Africa has previously exported GMOs to Swaziland.<sup>64</sup>

## Developments elsewhere in Africa

Recently it was reported that government inspectors in Zimbabwe were being sent to the country's borders to curb the influx of GMOs, following reports that farmers are incurring huge losses due to competition from cheap imports.<sup>65</sup> In the case of poultry, local Zimbabwean producers who use non-GM maize for feed, at \$325 per ton, are being significantly undercut by imports from South Africa and Brazil, where chickens are fed on GM maize feed costing around \$160 per ton.<sup>66</sup> The latest data from the UN FAO forecasts a 3% increase in cereal production in Zimbabwe from 2009 to 2010. However, maize production is up 7% over the previous year, and 27% higher than the 2005 – 2009 average. The overall food security situation within the country is predicted to remain stable throughout the rest of 2010, and is expected to continue into the 2010/2011 cropping season.<sup>67</sup> Ghana currently has a new biosafety bill before parliament, having previously been approved by the cabinet. The UK Department of Environment, Food and Rural Affairs (DEFRA) is funding a taxonomy project in Ghana, which is keen to develop biotechnology in the country.<sup>68</sup>

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vi. As Swaziland is a net importer of maize this renders any safety framework for domestic production practically meaningless..

## CONCLUSION

This year the South African maize harvest has been in excess of 13 million MT. It is impossible to give a precise figure for how much of this is GM. However, going on the fact that 52% of seed sales in 2008/09 were GM it would be safe to say that perhaps as much as 6 million MT of this year's maize is GM. The year 2010 appears to have marked a shift in GM trading patterns in South Africa. It received its first bulk commodity imports of GM maize since 2008. Perhaps more significantly, the first commodity exports of GM maize were dispatched to other African countries (where maize is also a staple). Only time will tell if this is just a one-off event to find markets for excess GM maize production in South Africa, or whether it marks a significant shift in agricultural policy from the South African government.

While food security remains a significant problem in Southern and Eastern Africa, domestic maize production in the recipient countries of the GM maize shipments has actually increased between the previous cropping year and the present. In the case of Kenya, it has been stated that any remaining shortfalls in maize supply can be more than compensated for by the regional maize trade in East Africa. The fact that as much as 80% of all agricultural trade in the region is informal and undocumented has two implications: Firstly, claims (that have also been used in the past) that GM supplies are the only possible option to plugging supply gaps cannot be corroborated with absolute certainty. Secondly, and perhaps even more worryingly, if there is such a large informal trade in maize and other agricultural products between countries in the region, no amount of biosafety legislation would be able to monitor GMOs once they had entered into one country in the region.

Food security is a complex socio-economic issue that cannot be purely addressed through a technocratic prism of yield and production. The record maize crop in South Africa will mean nothing to those with no economic means to access it, especially if it is sold on international markets to the highest bidder. The previous illustration of a major South African grain trader's manipulation of a food supply crisis in Kenya for increased profits does nothing to reassure one in this regard. South Africa's attempts to dump surplus GMOs on countries that have not even fully implemented their own biosafety frameworks is a major cause for concern, and all too reminiscent of the concerted effort shown by the biotech industry and its partner 'public' organizations to steer the biosafety discourse towards trade facilitation, and away from the Precautionary Principle. .

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