

***MONSANTO'S "SEED OF HOPE CAMPAIGN" IN SOUTH AFRICA - A BRIEFING DOCUMENT***

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**INTRODUCTION**

Monsanto has conceived of an ingenious smallholders' programme known as the 'Seeds of Hope Campaign', which targets the 'bottom of the pyramid'-very low-income consumers who have substantial purchasing power as a group.<sup>1</sup> Closed markets in Europe, world wide consumer rejection, heated international debates about the risks of GMOs, and the intransigence of Africa, sans, South Africa, to commercially accept GMOs, hugely threatened Monsanto's market share in the agricultural biotechnology industry. Thus, during the 1990s, Monsanto introduced 'Combi-Packs'- boxes of materials designed specifically for smallholder farmers, having access to anything from 1/4-5 hectares of land. The boxes contain a package of hybrid maize seed, some fertilizer, some herbicide, and pictogram instructions for illiterate users.<sup>2</sup>

The 'Seeds of Hope' campaign in South Africa was linked to a wider initiative implemented by Monsanto in 13 different countries, which targeted poor smallholder farmers. This programme not only secured a new market, but also portrayed Monsanto as being committed to sustainable agriculture and food security by providing 'resource poor', 'smallholder' farmers with training, technical assistance and advice on conservation tillage practices and other agricultural methods. To give an idea of the scale of the programme, by the end of 2001, Monsanto was reported to be reaching 320,000 smallholder farmers worldwide.<sup>3</sup>

In this briefing, we offer information about Monsanto's Seed of Hope Campaign in the Eastern Cape-the poorest of South Africa's nine provinces, where Monsanto's project was subsidised with huge chunks of public funds, which enabled it to penetrate extremely impoverished communities- first by introducing a Green Revolution type package as an important precursor to the introduction of its GM maize seeds, ably assisted by Bayer Cropscience, amongst other players.

During September 2006, the Bill & Melinda Gates Foundation and the Rockefeller Foundation announced a donation of \$150 million to contribute to a "Second Green Revolution" in Africa to alleviate poverty and hunger. <sup>4</sup> The money will be used, amongst other things, to promote technology packages for small-scale farmers containing fertilizer and new seeds.<sup>5</sup> These new initiatives have solid links with Monsanto, as Monsanto's former vice-president for international partnerships, Rob Horsch, has been appointed as Senior Program Officer of the Gates Foundation. Horsch is well known for his close association, with the notorious Kenya GM sweet potato project led by Monsanto and Florence Wambugu, which dismally failed to deliver, but most certainly helped by opening African doors to GM.<sup>6</sup> The aims of this new Green Revolution for Africa is very similar to Monsanto's Seeds of hope campaign and is likely to benefit the seed and

fertilizer industries, while having negligible impacts on total food production and further marginalizing African rural areas.<sup>7</sup>

## SEEDS OF HOPE CAMPAIGN

Monsanto's Combi Pack claims to increase the yield of maize crops and to be less labour intensive than conventional farming. These 'productivity gains' are said to give farmers extra time and, in some cases, extra income for other entrepreneurial activities.<sup>8</sup>

Another important component of the Seed of Hope Campaign is the promotion of 'no or low till farming.' This is a minimally invasive conservation farming technique, in that farmers do not plow or till the land. Instead, they cut a small furrow for the seeds.<sup>9</sup> This farming practice encompasses minimal soil disturbance, maintenance of a permanent vegetative soil cover, direct sowing, and sound crop rotation.<sup>10</sup> It is particularly beneficial for smallholder farmers, because there is no need to use a tractor, a major cost saving.<sup>11</sup> However, using this technique promotes the use of herbicides, since weeds are not removed by tilling the land, and therefore, Monsanto is a fervent supporter of this technique. However, several studies have indicated that Monsanto's Roundup herbicide is a threat to human health; it is not only a hormone-disruptor, but is also associated with birth defects in humans.<sup>12</sup>

To date, Monsanto has been directly involved in smallholder projects in various countries in the Latin America, Asia and Africa (Mexico, India, Indonesia, Kenya, Nigeria and South Africa).<sup>13</sup> Monsanto plans to distribute the Combi Packs to many other Sub-Saharan African countries as these markets are estimated to be more profitable than the South African market where Monsanto already has a stronghold in the commercial agricultural sector. The agricultural population in South Africa is approximately only 14 percent of the total population, compared to around 65% in sub-Saharan countries.

## 'SEEDS OF HOPE' IN SOUTH AFRICA

Monsanto introduced Combi-Packs for the South African market at the end of the 1990s. The idea for this product grew out of Monsanto's involvement in the Landcare Programme of the South African government's (the National and Provincial Departments of Agriculture, Conservation, and Environment and with various agricultural extension offices in KwaZulu-Natal and in Mpumalanga) <sup>14</sup>. The Landcare Programme was initiated in 1999, and launched as a community-based programme aimed at alleviating rural poverty and high unemployment. Through fostering public and private partnerships, the Landcare Programme promoted the conservation of natural resources (soil, water and vegetation) through sustainable utilisation and the increase of productivity.<sup>15</sup>

As an intrinsic part of this programme, Monsanto participated in various demonstration trials, introducing no-till agriculture and Combi-Packs to smallholder black farmers. In most areas, these packs were sold through private agents. Following on from this, Monsanto introduced its patented GM maize varieties, Roundup Ready (herbicide tolerant) and Bt (insect resistant) maize seeds.<sup>16</sup>

Monsanto has been particularly active in the Eastern Cape Province through the Massive Food Production Programme, a five- year project that was initiated in 2002 and which received R350 million government support.<sup>17</sup> Through this programme, emerging farmers were given subsidies to buy seeds, herbicides and fertilizers. This provided an important vehicle for public funding to be accessed for the purchase of Monsanto's package and in some ways thus government itself became an important agent to promote Monsanto's campaign.<sup>18</sup>

The Eastern Cape's Provincial manager of ACDASA (Agricultural chemicals Distribution Association South Africa), Mr. Greenwood pulled in various multinational companies to assist in the training of agricultural extension offices involved in the Massive Food Production Programme. Amongst these multinational companies involved were Total South Africa, Monsanto, Agrizone, Bayer Crops and Life sciences and Pannar. The main aim of this initiative was to introduce Roundup Ready seeds as well as insect-resistant (Bt) maize seeds (YieldGard seeds) to the communities enrolled in the programme. Agricultural extension offices thus received training in, amongst others, health and safety issues around using chemicals (provided by Total SA) and the use of cultivars (Monsanto) etc.

Bayer Crop Science through its company in the Eastern Cape, Wenkem SA(Pty)Ltd<sup>19</sup>, is Monsanto's main agent in the Eastern Cape and covers about 80% of Monsanto's sales in the province.<sup>20</sup> It thus plays an important role in supplying Monsanto's seeds and herbicides. A local farmers co-operative, Umtiza Farmers Corporation<sup>21</sup> is responsible for seed distribution. Having said this, we mention that no quantities on the sales of Combi-Packs within South Africa generally or the Eastern Cape Province in particular could be obtained-not for lack of trying but because it seems as if this information is not in the public domain. We could also not obtain figures of how much GM seed has been sold to the communities.

Nevertheless, research indicates that these initiatives have yielded limited success-for various reasons. These include the frequent delays caused by the Provincial government in paying funds to the farmers enrolled in the programme, resulting in farmers often planting too late into the growing season. Monsanto also held the cherished hope that increased yields would mean more disposable income for these farmers to purchase its GM seeds. Contrary to these expectations, corporate interest in the initiative is waning and many actors are withdrawing. <sup>22</sup>

Where does it leave these farmers now that corporate interest is fading away? What are the long-term implications for local smallholder farmers who changed from using open pollinated seeds to hybrid seeds? What is the position with those farmers that are using GM seeds? What are the overall food security implications for the region? What are the environmental impacts?

## EASTERN CAPE COMMUNITIES INVOLVED

Most emerging farmers currently involved in the Massive Food Production Programme in the Eastern Cape come from the former apartheid bantustans or homelands, Ciskei and Transkei.<sup>23</sup> The Eastern Cape is the poorest province of the country; it has the lowest monthly household expenditure, with 48% of the population classified as poor, while 65% of the population live in rural areas.<sup>24</sup> Of a R150 million subsidy allocated to the Massive Food Production Programme in 2004, the key regions targeted were Alfred Nzo (Mount Ayliff, Kokstad and Matatiele), OR Tambo (Umtata and Mqanduli) and Amatole (Idutywa to Bedford). These regions were chosen because of their agricultural potential<sup>25</sup> and are discussed below. Umtiza currently supplies Combi-Packs to farmers in the former Transkei up to Mtatha (OR Tambo and the Amathole district) as well as to parts of the Ciskei (Chris Hani District).

### *OR Tambo District*

O.R. Tambo District Municipality is situated in the North Eastern part of the Eastern Cape Province and covers most of the former Transkei. The population is estimated to be more than 1.6 million and the main (economic) centre is Mthatha. The coastal belt in the region is sub-tropical, and is well watered, with many rivers and rainfall above 700mm per annum in most areas.<sup>26</sup> Nevertheless, the O.R. Tambo district is the poorest in the Eastern Cape with 64.6% of the people living in poverty.<sup>27</sup> Unemployment is very high with 77% of the production population being unemployed. The biggest employer is the public sector, which provides about 50% of the formal employment. Agriculture, predominantly forestry, is the major private sector in the local economy contributing to 8% of formal employment. There are significant numbers of small commercial farmers in the area, concentrating on mixed farming of livestock and crops (mostly maize), while subsistence agriculture makes a major contribution to household food security in the district.<sup>28</sup> Social services require massive improvement; almost all houses (99%) are informal, only 9% of households have potable water on site and 49% have a flush toilet or pit latrine.<sup>29</sup>

### *Chris Hani District*

The Chris Hani District is situated in the centre of the province and has a total population of over 800,000.<sup>30</sup> It covers part of the semi-arid Karoo in the west to the hills of the Transkei in the east. Chris Hani is the second largest of the districts and the main centre is Queenstown. <sup>31</sup> 93% of the population live in the former Ciskei and Transkei, and reside in rural or semi-rural areas.<sup>32</sup> The overall unemployment rate is about 22% and 43% of the population live under the poverty line.<sup>33</sup> However, these statistics mask the high unemployment in the Ciskei and Transkei areas, as well in the remoteness of some places in the Karoo. The district contributes 7% to Provincial economy and agriculture is the largest private sector activity (13% of the local economy), providing 21% of employment. The predominant economic activity is livestock farming. Only 28% of households have potable water on site and 50% have a flush toilet or pit latrine.<sup>34</sup>

### *Amathole District*

The Amathole District contains the highly urban Buffalo City Local Municipality (East London, King William's Town and Mdantsane), while two thirds of the district covers the former Ciskei and Transkei. The total population is over 1.6 million. The Amathole District includes both a modern manufacturing economy in East London, and rural poverty in the ex-Ciskei and Transkei.<sup>35</sup> The education levels are low with 46% of the population having either only primary schooling or no schooling at all. The District is the second largest economy in the Eastern Cape, contributing 27% to the provincial economy. The poverty rate of 61% is the second lowest of the six district municipalities in Eastern Cape and lower than the provincial municipal average of 62%. This is due to the low poverty rate of 46,5% in the Buffalo City.<sup>36</sup> Agriculture provides for only 8% of formal employment, however this percentage varies greatly within the district. Agriculture in the ex-homelands is mainly small-scale crop farming and open grazed livestock, with most farmers farming on a subsistence scale. The ex-homeland areas are mostly under communal land tenure, although significant areas of private tenure exist in ex-homeland areas around Peddie and Butterworth. Some 68% of houses in the district are informal, either non-serviced sites in the former homelands or the townships in Buffalo City. Only 35% of households have water on site, but 70% of households have a flush toilet or pit latrine.<sup>37</sup>

### LONG TERM IMPLICATIONS: FOOD SECURITY

We have to ask the question: what will the long-term implications be of the 'Seeds of Hope' campaign for smallholder farmers in these different areas? Apart from associated biosafety health and safety risks, the introduction of hybrid and GM technologies has far reaching food security implications for the affected communities.

Hybrid and GM technologies have been designed for large-scale intensive monoculture production, while most arable land in various African countries is generally unsuitable for this. Not only do most regions have low or unpredictable rainfall and high occurrence of diseases and pests, most areas are also limited by their domestic infrastructure; farmers often lack access to markets, capital, infrastructure, research extension services, and all other necessary forms of support.<sup>38</sup>

Using new technologies such as hybrid and GM seeds in African regions will not dramatically improve farmers' yield compared to that received from farming with traditional, open pollinated varieties. In addition, in comparison to using open pollinated seeds, which are often saved by the farmers themselves, hybrid and GM seeds are expensive inputs, which need to be bought every planting season. The price for a Combi-Pack with conventional seed is R232, the Roundup Ready GM maize seed being R343, and the GM Bt variety, R328 whereas the estimated income of farmers in the Eastern Cape areas (as discussed above) is often no more than R1000 a month.<sup>39</sup> Therefore, insubstantial increases in yield for resource poor farmers using new seed varieties can be financially disastrous for farmers who do not have any access to capital or other complimentary incomes.<sup>40</sup> Furthermore, with farmers changing to hybrid and GM seeds,

the availability of saved seeds declines, leaving the farmers no opportunity to go back to their conventional way of farming. It is anticipated that the scarcity of open pollinated seeds might occur among smallholder farmers in the Eastern Cape, as most farmers partaking in the Massive food production programme now use hybrid seeds.<sup>41</sup> The use of GM seeds also raise important ethical and legal questions concerning the contamination of farmers varieties by GMOs.

## CONCLUSION

In this briefing, we have merely skimmed the edges of the complexities of the issues involved. Many important issues need more discussion, debate and investigation. These include how government subsidies are spent; concerns about accountability especially where such public funds are used to enrich multinational seed and agrochemical companies such as Monsanto and Bayer; the appropriateness of companies such as Total and Monsanto to provide training to rural communities when many rural NGOs are skilled to deliver this service; intellectual property rights and contractual issues affecting small scale farmers; biosafety risks and public access to reliable statistics of seed sales, number of farmers affected and so forth.

What is clear, however, is that Monsanto and the South African government appear bent on taking small-scale farmers down a potentially irreversible path fraught with risks and complexities that place them in an extremely vulnerable position - the last thing they need.

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3 Glover, D. Perspectives on technology, agriculture and farmers: the Monsanto Smallholder Programme, paper presented at conference hosted by the Society for Social Studies of Science, Vancouver, November 2006 (available from the STS Working Archive at <http://echo.gmu.edu/working/object/47>, accessed 31 January 2007); Glover, D. (in press), Monsanto and Smallholder Farmers: A case-study on corporate accountability, IDS Working Paper 277, Brighton, UK: Institute of Development Studies (paper will be available to download at <http://www.ids.ac.uk/ids/bookshop/index.html> shortly).

4 Bill & Melinda Gates Foundation, 'Bill & Melinda Gates , Rockefeller Foundations Form Alliance to Help Spur Green Revolution in Africa,' <http://www.gatesfoundation.org/GlobalDevelopment/Agriculture/Announcements/announcement-060912.htm> (12 September 2006).

5 Peter Rosset, 'Gateses' approach to African hunger is bound to fail,' [http://seattlepi.nwsourc.com/opinion/286029\\_gatesplan22.html](http://seattlepi.nwsourc.com/opinion/286029_gatesplan22.html) (22 September 2006).

6 GM Watch.org, Monsanto vice president joins the Gates Foundation,'

<http://www.gmwatch.org/archive2.asp?arcid=7158> (17 October 2006).

7 Rosset, 'Gateses' approach to African hunger is bound to fail.'

8 Boudreaux, Seeds of Hope, 2.

9Ibid. 2.

10Ibid. 11.

11Ibid.

12 Organic Consumers Association, 'Monsanto's Roundup Herbicide Threatens human health,' <http://www.organicconsumers.org/Monsanto/roundup92502.cfm> (September 2002).

13 Ibid., 20.; Monsanto was indirectly involved in a larger number of projects, through its support for programmes implemented by Winrock International in 'West Africa and Indonesia' and by Sasakawa Global 2000 in 'Ghana, Ethiopia, Tanzania, Malawi and Mozambique'. See: Ibid., 20.

14 Boudreaux, Seeds of Hope, 11.

15 Landcare South Africa, 'Implementation framework for the landcare programme,' <http://www.nda.agric.za/docs/Landcare/landcare.htm> (February 1999).

16 Personal communication, E.G. Davie, Free Market Foundation, 26 January 2007.; the commercial use of Roundup ready seeds was only released in 2003; see: African Centre of Biosafety, A profile of Monsanto in South Africa (April 2005) 13.

17 Daily Dispatch, Major EC drive to improve crop production, <http://www.amatoledm.gov.za/articles/ANNHT3008041036.htm> (10 June 2004).; Candace Freeman, 'R18m for ECape skills training,' [http://www.southafrica.info/doing\\_business/economy/development/skills/ecape-skillstraining.htm](http://www.southafrica.info/doing_business/economy/development/skills/ecape-skillstraining.htm) (16 March 2004).

18 Personal communication, Mark Wells, Gaia cooperative, 23 January 2007.; Personal Communication John Allwood, General Manager Technical Services, Eastern Cape Department of Agriculture, 26 January 2007.

19 Wenkam markets, sells and distributes agri-chemical products within South Africa. These products include herbicides (23% of turnover), fungicides (27% of turnover), insecticides (40% of turnover) and pesticides.

20 Personal communication, Mr. Breitenbach, Monsanto South Africa, 30 January 2007.

21 This agri-business operates in the Eastern Cape Province and entered the market in 1993. The company currently has 12 different branches and a total of about 200 employees. Members and customers are made up of commercial and emerging farmers, as well as small-scale stockowners and crop growers. Daily Dispatch, 'Developing sustainable agriculture,' <http://www.dispatch.co.za/2004/05/07/Farming/f4.html> (7 May 2004)

22 Personal communication, John Greenwood.

23 Personal communication, John Allwood.

24 Edward Lahiff, 'It is not easy to challenge a chief': Lessons from Rakgwadi. Land reform and sustainable livelihoods in South Africa's Eastern Cape province (Programme for Land and Agrarian Studies; October 2002) 5.

25 Daily Dispatch, 'Major EC drive to improve crop production,' <http://www.amatoledm.gov.za/articles/ANNHT3008041036.htm> (10 June 2004).

20 Eastern Cape Tourism Board , 'Oliver Tambo District,' <http://www.ectb.co.za/destinations/page.asp?index=239> (visited at 30 January 2007).

- 27 Eastern Cape Department of Social Development, 'Socio-Economic & Demographic Profile: O.R. Tambo District Municipality,' [http://www.socdev.ecprov.gov.za/statistics/demographics/or-tambo\\_area\\_info.htm](http://www.socdev.ecprov.gov.za/statistics/demographics/or-tambo_area_info.htm) (Visited at 30 January 2007).
- 28 Rather outdated statistics of 1997 claim that approximately 64% of the working population is to some extent involved in subsistence farming. See: Eastern Cape Department of Social Development, 'Socio-Economic & Demographic Profile: O.R. Tambo District Municipality.'
- 29 Eastern Cape Development Cooperation, 'Oliver Tambo District,' <http://www.ecdc.co.za/districts/districts.asp?pageid=34> (visited at 30 January 2007).
- 30 Health Systems Trust, 'ISDS Sites: Chris Hani District Municipality,' <http://www.hst.org.za/generic/41> (visited at 30 January 2007).
- 31 Eastern Cape Tourism Board, 'Chris Hani District,' <http://www.ectb.co.za/destinations/page.aspx?index=237> (visited at 30 January 2007).
- 32 Eastern Cape development Cooperation, " Chris Hani District,' <http://www.ecdc.co.za/districts/districts.asp?pageid=36> (visited at 30 January 2007).; Health Systems Trust, 'ISDS Sites: Chris Hani District Municipality.'
- 33 Health Systems Trust, 'ISDS Sites: Chris Hani District Municipality.'
- 34 Eastern Cape Development Cooperation, " Chris Hani District,'
- 35 Eastern Cape Tourism Board, 'Amathole District,' <http://www.ectb.co.za/destinations/page.aspx?index=235> (visited at 30 January 2007).
- 36 Mr. Elroy Afrika Pretoria, Deputy Director-General: Department of Provincial and Local Government, 'Preview on Amathole district municipality,' [http://www.thedplg.gov.za/index.php?option=com\\_content&task=view&id=84&Itemid=36](http://www.thedplg.gov.za/index.php?option=com_content&task=view&id=84&Itemid=36) (2 December 2005).
- 37 Eastern Cape Development Cooperation, 'Amthole District,' <http://www.ecdc.co.za/districts/districts.asp?pageid=37> (visited at 30 January 2007).
- 38 Devlin Kuyek, 'Genetically Modified Crops in African Agriculture. Implications for Small Farmers,' <http://www.grain.org/briefings/?id=12> (august 2002).
- 39 Boudreaux, Seeds of Hope, 14. ; In O.R. Tambo municipality, 67.6% of the population earn between 0-R500 a month, while 88% earns between 0 -R1500 a month; in Chris Hani District 59% earns between 0-R500 a month, while 85% between 0 -R1500 a month; in Amathole Disctrict, 51% earn between 0-R500 per month, while 77.1% earns between 0-R1500 a month. See: Eastern Cape Department of Social Development, 'Socio-Economic & Demographic Profile: O.R. Tambo District Municipality,'; Eastern Cape Department of Social Development, 'Socio-Economic & Demographic Profile: Chris Hani District,' [http://www.socdev.ecprov.gov.za/statistics/demographics/chris-hani\\_area\\_info.htm](http://www.socdev.ecprov.gov.za/statistics/demographics/chris-hani_area_info.htm) (visited at 30 January 2007); Eastern Cape Department of Social Development, 'Socio-Economic & Demographic Profile: Amathole District,' [http://www.socdev.ecprov.gov.za/statistics/demographics/amatole\\_area\\_info.htm](http://www.socdev.ecprov.gov.za/statistics/demographics/amatole_area_info.htm) (visited at 30 January 2007).
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