

# BAYER CROPSCIENCE

CORPORATE WATCH BIOTECH BRIEFINGS 2003

This briefing aims to give campaigners (primarily in the UK) an insight into Bayer CropScience, who they are, what they do and how they operate.

## 1. Summary

Bayer CropScience is the agricultural subsidiary of the German based pharmaceutical and chemical company Bayer AG. In 2002 Bayer AG had sales of €29,624 million.<sup>1</sup> Bayer CropScience was formed in 2002 following the acquisition by Bayer AG of Aventis CropScience - itself the combination of the agricultural operations of Hoechst and Schering (AgrEvo) and Rhone-Poulenc. In 2002 Bayer CropScience had sales of €4,697 million<sup>2</sup> and, based on pro-forma figures for 2001, ranked as the world's biggest player in agrochemicals.<sup>3</sup> Bayer CropScience is also a major player in the development and marketing of GM crops. Bayer's GM 'LibertyLink' (herbicide tolerant) and SeedLink (hybrid breeding system) crops are currently sold in the US and Canada.<sup>4</sup>

Of all the companies involved in the development of GM crops in the UK, Bayer CropScience has the most to gain should GM crops be commercialised. Nine of the eleven varieties of GM crops currently awaiting approval for commercial growing in the UK are owned by Bayer CropScience.<sup>5</sup> Bayer's 'Chardon LL' GM LibertyLink fodder maize is first in line in the queue of GM crops waiting to get approval for commercial growing in the UK. It also owns a number of varieties of GM oilseed rape which are close to gaining approval for commercial growing in the UK. Bayer CropScience, and its precursor companies (Aventis CropScience, AgrEvo, Rhone-Poulenc and Plant Genetics Systems), have conducted more GM field trials in the UK than any other company. Its GM fodder maize and oilseed rape have made up the majority of the crops grown in the farmscale trials.

GM crops are a key part of Bayer's future and it, perhaps more than any other company, has an interest in seeing them grown in the UK and northern Europe. It is heavily involved with a number of industry joint initiatives such as SCIMAC, ABC and CropGen (see overview briefing for more details of these organisations) designed to influence both the UK public and government on the issue of GM crops. Paul Rylott, head of Bayer CropScience's UK BioScience unit is acting chair of the ABC and has recently been appointed to the Agriculture and Environment Biotechnology Council (AEBEC) - the UK government's advisory body on GM crops in the environment.<sup>6</sup>

Bayer CropScience are a relatively small player in seeds in Europe; it owns a 15% holding in German seed company KWS<sup>7</sup> (who have a majority stake in UK seed company CPB Twyford). It also owns the vegetable seed company Nunza<sup>8</sup> (and European subsidiaries Nunhems and Hild). Should any of Bayer's GM crops be commercialised in the UK it is likely that Bayer would have to seek a partnership with one or more seed companies to market its products to farmers.

1 Bayer AG annual report available online at [www.bayer.com/annualreport2002/](http://www.bayer.com/annualreport2002/) (viewed 07/06/03)

2 Bayer AG annual report available online at [www.bayer.com/annualreport2002/](http://www.bayer.com/annualreport2002/) (viewed 07/06/03)

3 based on table 4, page 11 of 'GM Crops-going against the grain' Action Aid, May 2003 available online at [www.actionaid.org/resources/pdfs/gatg.pdf](http://www.actionaid.org/resources/pdfs/gatg.pdf) (viewed 07/06/03) originally sourced from AgriFutura, Phillips McDougall Agriservice, March 2002, No.29

4 [www.bayercropscience.ca](http://www.bayercropscience.ca) and [www.bayercropscienceus.com](http://www.bayercropscienceus.com) (viewed 07/06/03)

5 DEFRA National Lists of Varieties Public Register for: GM Maize available online at [www.defra.gov.uk/planth/pvs/pubreg/preg05.htm](http://www.defra.gov.uk/planth/pvs/pubreg/preg05.htm) applications 51/833 and 51/886; GM Winter oilseed rape available online at [www.defra.gov.uk/planth/pvs/pubreg/preg03.htm](http://www.defra.gov.uk/planth/pvs/pubreg/preg03.htm) applications 35/1174 35/1318 35/1494 and 35/1629; and Spring oilseed rape available online at [www.defra.gov.uk/planth/pvs/pubreg/preg06.htm](http://www.defra.gov.uk/planth/pvs/pubreg/preg06.htm) applications 35/959 35/1210 and 35/1211 (all viewed 07/06/03)

6 AEBEC 'Membership Details' web page available online at [www.aebc.gov.uk/aebc/about/member.shtml](http://www.aebc.gov.uk/aebc/about/member.shtml) (viewed 07/06/03)

7 KWS 'Shareholders Information' web page available online at [www.kws.de/ca/de/bik/awuilanguage/uk/](http://www.kws.de/ca/de/bik/awuilanguage/uk/) (viewed 08/06/03) and 'Südzucker AG sells 15% of its KWS ownership to HypoVereinsbank', Seedquest News Release 14/03/03 available online at <http://seedquest.com/News/releases/2003/march/5530.htm> (viewed 08/06/03)

8 Nunza homepage available online at [www.nunza.com](http://www.nunza.com) (viewed 08/06/03)

# Bayer CropScience

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## 2. Company structure and history

### Structure

Bayer CropScience is one of four business units operated by Bayer AG. Bayer AG operates in chemicals, healthcare and polymers as well as crop science. In 2002 Bayer CropScience was Bayer AG's third largest business unit accounting for approximately 16% of its sales.<sup>9</sup> Bayer CropScience is a new company, formed in June 2002 with the acquisition by Bayer AG of Aventis CropScience. The company combines Bayer's existing agrochemicals business, Bayer Crop Protection, with Aventis CropScience.

### History

Bayer CropScience is the end result of a string of mergers, acquisitions and joint ventures between European agrochemical and seed companies that has taken place since the mid-1990s. Bayer CropScience is in effect the sum total of the agricultural operations of four of the largest European chemical companies, AgrEvo (Hoechst and Schering), Rhone-Poulenc and Bayer.

#### 1. Bayer<sup>10</sup>

German chemical and pharmaceutical company founded in 1863 initially as a chemical company manufacturing artificial dyes. By the beginning of the 20th century the company was manufacturing a range of chemical and pharmaceutical products. Between the mid-1920s and mid-1940s Bayer was part of the notorious IG Farben along with BASF and Hoechst.<sup>11</sup> IG Farben developed chemical weapons<sup>12</sup> and used slave labour.<sup>13</sup> At the end of WWII several IG Farben executives were jailed for war crimes.<sup>14</sup>

Bayer had considerable agro-chemical interests but no direct involvement in GM crops before its purchase of Aventis CropScience from Aventis and Schering in June 2002 to form Bayer CropScience. [www.corporatewatch.org.uk/profiles/biotech/bayer/bayer1.html](http://www.corporatewatch.org.uk/profiles/biotech/bayer/bayer1.html)

#### 2. Hoechst<sup>15</sup>

German chemical and pharmaceutical company founded in 1863. Like Bayer, Hoechst was initially a chemical company which then expanded into pharmaceuticals. It too was part of IG Farben (see section on Bayer). In 1994 Hoechst set up a joint venture with Schering called AgrEvo. Hoechst merged with Rhone Poulenc in 1999 to form Aventis.

#### 3. Schering<sup>16</sup>

German chemical and pharmaceutical company founded in 1851. In 1994 Schering set up a joint venture with Hoechst called AgrEvo. Schering retained a stake in Aventis CropScience which it sold to Bayer in 2002 as part of the Bayer CropScience deal. Schering still exists today as a pharmaceutical company and has no involvement in GM crops.

#### 4. AgrEvo<sup>17</sup>

German based agro-chemical and GM crops joint venture between Hoechst (60%) and Schering (40%) formed in 1994. AgrEvo carried out a large number of GM crop trials in the UK in the 1990s. AgrEvo subsequently went on to become the major part of Aventis CropScience when Hoechst and Rhone-Poulenc merged to form Aventis in 1999.

#### 5. Rhone-Poulenc<sup>18</sup>

French chemical and pharmaceutical company founded in 1895. It merged with Hoechst to form Aventis in 1999.

#### 6. Aventis Crop Science<sup>19</sup>

French/German agrochemical, seed and GM crops company. Formed in 1999 as part of the creation of Aventis from Hoechst and Rhone Poulenc. Aventis CropScience (ACS) was jointly owned by Schering (24%) and Aventis (76%). Aventis announced its intention to sell its CropScience business in November 2000.<sup>20</sup> By this time it was becoming clear that the 'lifescience' experiment (combining pharmaceutical and agricultural businesses within one company) had failed. The slower growth of the CropScience business, compounded by the StarLink contamination scandal (see box), was affecting the growth of the more profitable pharmaceutical business.<sup>21</sup> Aventis and Bayer agreed on the terms of the sale of the CropScience business in October 2001<sup>22</sup> and the sale was completed in June 2002.

9 Bayer AG annual report available online at [www.bayer.com/annualreport2002/](http://www.bayer.com/annualreport2002/) (viewed 07/06/03)  
10 for more information on Bayer's history go to [www.corporatewatch.org.uk/profiles/bayer/bayer1.html#history](http://www.corporatewatch.org.uk/profiles/bayer/bayer1.html#history)  
11 [www.bayer.com/en/bayer/history/ug\\_1925.php](http://www.bayer.com/en/bayer/history/ug_1925.php) (viewed 17/06/03)  
12 [www.mitretrek.org/home.nsf/Homelandsecurity/HistoryNerveGases](http://www.mitretrek.org/home.nsf/Homelandsecurity/HistoryNerveGases) (viewed 17/06/03) and 'Wall Street and the Rise of Hitler' By Antony C. Sutton. 1976. Chapter 2 'The Empire of IG Farben' available online at [http://reformed-theology.org/html/books/wall\\_street/chapter\\_02.htm](http://reformed-theology.org/html/books/wall_street/chapter_02.htm) viewed (17/06/03)  
13 'Germany: Farben to Create Slave Labor Fund'. Associated Press 23.08.00. available online at [www.corpwatch.org/news/PND.jsp?articleid=600](http://www.corpwatch.org/news/PND.jsp?articleid=600) (viewed 17/06/03).  
14 'Global Parasites, Five Hundred Years of Western Culture' Winin Pereira and Jeremy Seabrook, 1994, Earthcare Books, p137-138  
15 Hoechst history web page available online at [www.hoechst.com/historie/historie\\_en.htm](http://www.hoechst.com/historie/historie_en.htm) (viewed 17/06/03)  
16 Schering history web page available online at [www.schering.de/eng/irf.html?eng/investorrelationsforum/contacts\\_events/intro.htm](http://www.schering.de/eng/irf.html?eng/investorrelationsforum/contacts_events/intro.htm) (viewed 17/06/03)  
17 Corporate Watch Aventis Briefing available online at [www.corporatewatch.org.uk/publications/GEBriefings/aventis1.html](http://www.corporatewatch.org.uk/publications/GEBriefings/aventis1.html) (viewed 17/06/03)  
18 Aventis history web page available online at [www.aventis.com/main/page.asp?pageid=6332214902514456564&folderid=70644420813501385674&lang=en](http://www.aventis.com/main/page.asp?pageid=6332214902514456564&folderid=70644420813501385674&lang=en) (viewed 17/06/03)  
19 Aventis history web page available online at [www.aventis.com/main/page.asp?pageid=6332214902514456564&folderid=70644420813501385674&lang=en](http://www.aventis.com/main/page.asp?pageid=6332214902514456564&folderid=70644420813501385674&lang=en) (viewed 17/06/03)  
20 'AVENTIS QUILTS - GENE GIANT TO SELL AGBIO DIVISION' NGIN news service 15/11/00 available online at <http://ngin.tripod.com/112.htm> (viewed 17/06/03)  
21 'AVENTIS QUILTS - GENE GIANT TO SELL AGBIO DIVISION' NGIN news service 15/11/00 available online at <http://ngin.tripod.com/112.htm> (viewed 17/06/03)  
22 'Bayer confirms CropScience purchase' Bettina Wassener, Financial Times; 03/11/01

23 'Monsanto and genetic engineering: Risks for investors' by Innovest Strategic Value Advisors/Greenpeace April 2003 available online at [http://web.greenpeace.org//reports/?campaign\\_id=3992](http://web.greenpeace.org//reports/?campaign_id=3992) (viewed 17/06/03)

24 'Monsanto and genetic engineering: Risks for investors' by Innovest Strategic Value Advisors/Greenpeace April 2003 available online at [http://web.greenpeace.org//reports/?campaign\\_id=3992](http://web.greenpeace.org//reports/?campaign_id=3992) (viewed 17/06/03)

25 'AgrEvo: From Crop Protection To Crop Production' by Jos Bijman, AgBioForum - Vol 4, No 1 - 2001 p20-25, available online at [www.agbioforum.org/v4n1/v4n1a04-bijman.htm](http://www.agbioforum.org/v4n1/v4n1a04-bijman.htm) (viewed 17/06/03)

26 'Rhône-Poulenc Agrochimie: An Uncertain Future' by Gérald Assouline and Pierre-Benoît Joly in AgBioForum - Vol 4, No 1 - 2001 p26-33 available online at [www.agbioforum.org/v4n1/v4n1a05-assouline.htm](http://www.agbioforum.org/v4n1/v4n1a05-assouline.htm) (viewed 17/06/03) and DEFRA Index of public register entries for applications to release GMOs for any other purpose than marketing under Directive 90/220/EEC (application No. 95/R7/2) available online at [www.defra.gov.uk/environment/gm/exper.htm](http://www.defra.gov.uk/environment/gm/exper.htm) (viewed 17/06/03)

27 Information Services for Biotechnology (search criteria 'Rhône Poulenc' and 'Isoxazole') available online at [www.nbiap.vt.edu/cfdocs/fieldtests3.cfm](http://www.nbiap.vt.edu/cfdocs/fieldtests3.cfm) (viewed 17/06/03)

28 DEFRA Index of public register entries for applications to release GMOs for any other purpose than marketing under Directive 90/220/EEC available online at [www.defra.gov.uk/environment/gm/exper.htm](http://www.defra.gov.uk/environment/gm/exper.htm) (viewed 17/06/03)

29 RAFI genotype 'Speed bump or blow out for GM seeds- Stalling markets, taco debacle and biotech bail outs' Dec 2000 available online at [www.etcgroup.org/documents/geno\\_seedbump.pdf](http://www.etcgroup.org/documents/geno_seedbump.pdf) (viewed 16/06/03)

30 p85 of 'Agrow Reports: Genetically Modified Crops 2-Genetic Engineering for Herbicide Tolerance' by Dr LG Copping, 13.11.98, PJB publications Ltd

31 [www.garstseed.com/GarstClient/Products/Corn/Results.aspx?query=ll](http://www.garstseed.com/GarstClient/Products/Corn/Results.aspx?query=ll) (17/06/03)

32 [www.bayercropscienceus.com/product\\_crop\\_center?product\\_id=291353164166667208747380199538](http://www.bayercropscienceus.com/product_crop_center?product_id=291353164166667208747380199538) (viewed 17/06/03)

33 [www.cottonexperts.com/m03/m0305.html](http://www.cottonexperts.com/m03/m0305.html) (viewed 17/06/03)

34 [www.bayercropscience.ca/products/seed\\_herb.asp](http://www.bayercropscience.ca/products/seed_herb.asp) (viewed 17/06/03)

35 p88 of 'Agrow Reports: Genetically Modified Crops 2-Genetic Engineering for Herbicide Tolerance' by Dr LG Copping, 13.11.98, PJB publications Ltd

36 'Australia farmers support NSW stay on GM canola' Reuters Sydney, 19/05/03 available online at [www.planetark.org/dailynewsstory.cfm?newsid=20829&newsdate=19-May-2003](http://www.planetark.org/dailynewsstory.cfm?newsid=20829&newsdate=19-May-2003) (viewed 18/06/03) and 'Australia GM canola hopes fade with state ban' Reuters Sydney, 09/05/03 available online at [www.planetark.org/dailynewsstory.cfm?newsid=20737&newsdate=09-May-2003](http://www.planetark.org/dailynewsstory.cfm?newsid=20737&newsdate=09-May-2003) (viewed 18/06/03)

37 'Mustard maker Awaits his Day' by Vidya Deshpande, in Biospectrum 10/02/03 available online at [www.biospectrumindia.com/content/research/10302101.asp](http://www.biospectrumindia.com/content/research/10302101.asp) (viewed 18/06/03)

38 'Mustard maker Awaits his Day' by Vidya Deshpande, in Biospectrum 10/02/03 available online at [www.biospectrumindia.com/content/research/10302101.asp](http://www.biospectrumindia.com/content/research/10302101.asp) (viewed 18/06/03)

## StarLink

In autumn 2000 traces of Aventis CropScience's Bt insect resistant maize known as 'StarLink' (Cry9C), which had been grown in the US but only had clearance for use as an animal feed, began to be discovered in the human food supply chain. Despite accounting for less than 1% of the total area of maize grown in the US in 2000, traces of StarLink contamination were found in upwards of 10% of all maize grown in the US for that year.<sup>23</sup> The incident has led to millions of dollars worth of product recalls and is said to have cost Aventis over \$1bn.<sup>24</sup> Liability for StarLink contamination has remained with Aventis rather than with Bayer CropScience.

## Involvement in GM crops

Bayer CropScience is organized into three segments: Crop Protection, Environmental Science and Bioscience. The bioscience segment deals with GM crops.

Each of the companies that historically make up Bayer CropScience - Bayer, Hoechst, Schering and Rhone-Poulenc - has had a long involvement with agricultural products beginning in the 1920s with the manufacture of chemical fertilisers and pesticides. Until its purchase of Aventis CropScience, Bayer AG has had little involvement in agricultural biotechnology. However, the companies that made up Aventis CropScience (AgrEvo and Rhone-Poulenc Agro) have been researching and developing GM crops since the mid-1980s.

The primary focus for AgrEvo (formerly Hoechst and Schering) was the development of crops tolerant to its own broad-spectrum herbicide glufosinate ammonium or 'Liberty'. AgrEvo developed 'LibertyLink' technology in a range of crops including oilseed rape, maize, cotton and rice. AgrEvo's biotechnology portfolio was significantly expanded by the acquisition in August 1996 of Belgian research company Plant Genetics Systems (PGS).<sup>25</sup> PGS' technology included its own version of the 'LibertyLink' herbicide tolerance system, a GM hybrid breeding system now used in 'SeedLink' crops, and insect resistance traits such as 'StarLink'. Importantly, the PGS acquisition also gave AgrEvo the capacity for plant breeding and seed production.

Rhone-Poulenc Agro focused on the development of crops tolerant to its own broad-spectrum oxynil based herbicides. Oxynil tolerance or BXN traits have been engineered into oilseed rape, cotton and tobacco.<sup>26</sup> Some research has also been undertaken into developing crops with tolerance to the herbicide isoxazole or 'Balance'<sup>27</sup>, and the herbicide asulum.<sup>28</sup>

## 3. Current Situation with GM crops

### 3.1 Global

Bayer CropScience is one of the leaders in the field of GM crops (figures for 1999 show what was then Aventis CropScience being in second place behind Monsanto, with a 7% share of the GM seeds market).<sup>29</sup> GM crops form an integral part of its future plans. At present, though, it is important to remember that GM crops form only a small proportion of Bayer CropScience's business, with traditional agrochemicals still accounting for the majority of its global sales. No figures are available to show the exact proportion of Bayer CropScience's sales that come from GM crops. However, figures from Aventis CropScience give some indication - in 2001 under 5% of its income was generated by its Bioscience unit.<sup>30</sup>

Bayer's principle sales of GM crops are in the US and Canada. In the US it sells LibertyLink maize,<sup>31</sup> LibertyLink oilseed rape and 'InviGor' LibertyLink/SeedLink oilseed rape.<sup>32</sup> It also sells BXN herbicide tolerant cotton.<sup>33</sup>

In Canada it sells LibertyLink maize, LibertyLink oilseed rape and 'InviGor' LibertyLink/SeedLink oilseed rape.<sup>34</sup> It also sells BXN herbicide tolerant oilseed rape under the name 'Navigator'.<sup>35</sup>

Bayer is pushing for the commercial growing of SeedLink/LibertyLink oilseed rape in Australia. Limited commercial growing may have taken place in 2003 and larger scale commercial growing is expected in 2004.<sup>36</sup>

Bayer, through its subsidiary ProAgro, is pushing for the commercial growing of SeedLink mustard in India. Plans for commercial growing were thwarted by objections made by the Indian Genetic Engineering Approval Committee (GEAC) in 2002, but commercial growing may take place in 2003/2004.<sup>37</sup>

## 3.2 UK

### UK field trials

Bayer CropScience and its precursor companies (Aventis CropScience, AgrEvo, PGS, Hoescht, Rhône-Poulenc) have had more GM field trials than any other company in the UK. Of the 221 applications for GM field trials made between 1991 and 2002, 63 (28%) have been made by companies now owned by Bayer CropScience.<sup>38</sup> The primary focus of these trials has been GM herbicide tolerant (LibertyLink) oil seed rape and fodder maize, and a combination of a GM hybrid breeding system (SeedLink) and herbicide tolerance (LibertyLink) in oilseed rape. It has also conducted a smaller number of trials of GM herbicide tolerant sugar beet, potatoes and wheat, all of which have now been discontinued. Several other companies including Advanta, Bejo Zaden BV, CPB Twyford, Hilleshog/New Farm Crops/Novartis (Syngenta), Nickerson, and Perryfield Holdings, and research institutions including John Innes Centre, IACR Brooms Barn and IACR Rothamstead have also used LibertyLink traits (presumably under license from Bayer/Aventis/AgrEvo/PGS) in their own GM crop trials.<sup>39</sup>

In recent years - in terms of acres grown in the UK - Bayer CropScience's GM maize and oilseed rape have far outnumbered crops grown by its nearest competitors Monsanto and Syngenta. Its crops have also made up the majority of the crops grown in the farmscale trials.

### Commercialisation of GM crops in the UK

Of all the companies involved in the development of GM crops in the UK it is Bayer CropScience that have the most to gain should GM crops be commercialised. Nine of the eleven varieties of GM crops currently awaiting approval for commercial growing in the UK are now owned by Bayer CropScience.<sup>40</sup>

#### T25 Fodder Maize<sup>41</sup>

Bayer own two varieties of GM herbicide tolerant (LibertyLink) fodder maize called Chardon LL and Sheridan - both of which are based on a GM crop line called T25. Both of these varieties have been grown extensively as part of the UK farm scale trials programme. Chardon LL (closely followed by Sheridan) is likely to be the first GM crop to get approval for commercial growing in the UK. All varieties of T25 maize have a part C consent allowing them to be grown anywhere in the EU. Both Chardon LL and Sheridan have completed their UK National Seed Listing trials. Opposition to Chardon LL from Friends of the Earth and other campaign groups has forced a lengthy enquiry into whether it should be included on the UK National Seed List. The enquiry has now been completed, and the decision to add Chardon LL to the National Seed List is expected by autumn 2003. In order to be grown in the UK both Chardon and Sheridan will also need a change in UK pesticide law to allow the use of the herbicide Liberty on maize. Some concern has been expressed that Bayer's current T25 maize varieties have taken so long to bring to the market that the conventional maize varieties upon which they are based are now long out of date, and that the current GM varieties are likely to be out performed by more recent conventional varieties.<sup>42</sup>

#### MS8/RF3 Oilseed Rape<sup>43</sup>

Bayer own six varieties of GM oilseed rape based on a GM crop line called MS8/RF3, which combines herbicide tolerance (LibertyLink) and male sterility/fertility restorer (SeedLink) hybrid technology.<sup>44</sup> All of these varieties are at an advanced stage of the UK commercialisation process. These varieties include two types of spring oilseed rape known as PH96S452 and PH96S443 (both of which have completed their UK National Seed Listing trials), and 4 varieties of winter oilseed rape PHW98-407 and PHW01-429 (both of which have completed their UK National Seed Listing trials) and PHW01-441 and PHW01450 (both of which are in the final year of their UK National Seed Listing trials). In early 2003 Bayer made an application for EU wide marketing consent for all GM oilseed rape varieties based on MS8/RF3.<sup>45</sup> If its application is successful and if MS8/RF3 varieties gain UK National Seed Listing consent they will not be available for sale to UK farmers until 2006 at the earliest.<sup>46</sup> MS8/RF3 varieties have been grown extensively as part of the UK farmscale trials programme and are grown commercially in Canada and the US.

38 EU Joint Research Council Biotech web pages on deliberate field trials in the UK available online at <http://biotech.jrc.it/deliberate/GB.asp> (viewed 18/06/03)

39 DEFRA Index of public register entries for applications to release GMOs for any other purpose than marketing under Directive 90/220/EEC available online at [www.defra.gov.uk/environment/gm/exper.htm](http://www.defra.gov.uk/environment/gm/exper.htm) (viewed 17/06/03)

40 information on MS8/RF3 varieties from DEFRA National Lists of Varieties Public Register for: GM Maize available online at [www.defra.gov.uk/planth/pvs/pubreg/preg05.htm](http://www.defra.gov.uk/planth/pvs/pubreg/preg05.htm) applications 51/833 and 51/886; GM Winter oilseed rape available online at [www.defra.gov.uk/planth/pvs/pubreg/preg03.htm](http://www.defra.gov.uk/planth/pvs/pubreg/preg03.htm) applications 35/1174 35/1318 35/1494 and 35/1629; and Spring oilseed rape available online at [www.defra.gov.uk/planth/pvs/pubreg/preg06.htm](http://www.defra.gov.uk/planth/pvs/pubreg/preg06.htm) applications 35/959 35/1210 and 35/1211 (all viewed 07/06/03)

41 information on T25 maize from Friends of the Earth briefing papers on 'T25 Maize' available online at [www.foe.co.uk/campaigns/real\\_food/resource/briefings/t25\\_maize.pdf](http://www.foe.co.uk/campaigns/real_food/resource/briefings/t25_maize.pdf) (viewed 18/06/03) and 'Bad Science Bad Decisions: The Evidence Against Aventis's GM Maize' available online at [www.foe.co.uk/campaigns/real\\_food/resource/briefings/bad\\_science\\_decisions.pdf](http://www.foe.co.uk/campaigns/real_food/resource/briefings/bad_science_decisions.pdf) (viewed 18/06/03)

42 'GM crops in performance worry' by Tom Allen-Stevens Farmers Weekly, UK, 21/03/03 available online at [www.gene.ch/genet/2003/Mar/msg00076.html](http://www.gene.ch/genet/2003/Mar/msg00076.html) (viewed 24/06/03)

43 general information on LibertyLink/SeedLink Oilseed Rape from 'Genetically Engineered Oilseed Rape: Agricultural Saviour or New Form of Pollution?' Genewatch Briefing May 1999.

44 DEFRA National Lists of Varieties Public Register for: GM Winter oilseed rape available online at [www.defra.gov.uk/planth/pvs/pubreg/preg03.htm](http://www.defra.gov.uk/planth/pvs/pubreg/preg03.htm) applications 35/1174 35/1318 35/1494 and 35/1629; and Spring oilseed rape available online at [www.defra.gov.uk/planth/pvs/pubreg/preg06.htm](http://www.defra.gov.uk/planth/pvs/pubreg/preg06.htm) applications 35/959 35/1210 and 35/1211 (all viewed 07/06/03)

45 'European GMO deliberate release and novel foods legislation: Consents and pending applications, including UK opinions', table 2, available online at [www.defra.gov.uk/environment/gm/pdf/euconsent.pdf](http://www.defra.gov.uk/environment/gm/pdf/euconsent.pdf) (viewed 07/06/03)

46 'GM crops in performance worry' by Tom Allen-Stevens Farmers Weekly, UK, 21/03/03 available online at [www.gene.ch/genet/2003/Mar/msg00076.html](http://www.gene.ch/genet/2003/Mar/msg00076.html) (viewed 24/06/03)

#### MS1/RF1 Oilseed Rape<sup>47</sup>

Bayer also own a single variety of spring GM oilseed rape based on a GM crop line called MS1/RF1 which also combines herbicide tolerance (LibertyLink) and male sterility/fertility restorer (SeedLink) hybrid technology. This variety is known as Archimedes or PHY31. Archimedes has completed its UK National Seed Listing trials but has not yet been added to the UK seed list. It has a limited part C marketing consent which allows it to be grown, for seed production only, anywhere in the EU.<sup>48</sup>

It is thought unlikely that any MS1/RF1 varieties will be grown commercially in the UK. MS1/RF1 contains an anti-biotic resistance gene, and was the cause of controversy in summer 2002 when it was revealed that small quantities had been found as an unauthorised contaminant in seed used in the GM farmscale trials.<sup>49</sup> No new application for a full part C EU marketing consent has been made for MS1/RF1 and it is therefore considered unlikely that Bayer will attempt to commercialise Archimedes in the UK.

#### Other GM Oilseed Rape

In early 2003 Bayer made two applications for EU wide marketing consents for GM oilseed rape lines other than MS8/RF3.<sup>50</sup> The two lines are both herbicide tolerant (LibertyLink), and are called Falcon (GS40/90pHoe6/Ac) and Liberator (pHoe6/Ac). Both crop lines have been withdrawn from UK National Seed Listing trials, but should they gain EU wide marketing consent it is possible that new varieties based on these lines might be developed for commercial growing in the UK.

47 general information on LibertyLink/SeedLink Oilseed Rape from 'Genetically Engineered Oilseed Rape: Agricultural Saviour or New Form of Pollution?' Genewatch Briefing May 1999.

48 'European GMO deliberate release and novel foods legislation: Consents and pending applications, including UK opinions', table 1, entry 5, available online at [www.defra.gov.uk/environment/gm/pdf/euconsent.pdf](http://www.defra.gov.uk/environment/gm/pdf/euconsent.pdf) (viewed 07/06/03)

49 Aventis CropScience letter to DEFRA August 2002 available online at [www.defra.gov.uk/news/2002/020815a.htm](http://www.defra.gov.uk/news/2002/020815a.htm) (viewed 18/06/03)

50 'European GMO deliberate release and novel foods legislation: Consents and pending applications, including UK opinions', table 2, available online at [www.defra.gov.uk/environment/gm/pdf/euconsent.pdf](http://www.defra.gov.uk/environment/gm/pdf/euconsent.pdf) (viewed 07/06/03)

51 Bayer AG web site available online at [www.bayer.com/annualreport2002/features/cropprotection2.html](http://www.bayer.com/annualreport2002/features/cropprotection2.html) (viewed 23/06/03)

52 KWS 'Shareholders Information' web page available online at [www.kws.de/ca/de/bik/awuilanguage/uk/](http://www.kws.de/ca/de/bik/awuilanguage/uk/) (viewed 08/06/03) and 'Südzucker AG sells 15% of its KWS ownership to HypoVereinsbank', Seedquest News Release 14/03/03 available online at <http://seedquest.com/News/releases/2003/march/5530.htm> (viewed 08/06/03)

53 'KWS: Going beyond sugar beet', by Jos Bijman in AgBioForum - Vol 4, No 1 - 2001 p46-51 available online at [www.agbioforum.org/v4n1/v4n1a08-bijman.htm](http://www.agbioforum.org/v4n1/v4n1a08-bijman.htm) (viewed 23/06/03)

54 Lochow Pettkus web site [www.lochow-pettkus.de/jsp/ctrl.jsp?cat=85&item=13:116](http://www.lochow-pettkus.de/jsp/ctrl.jsp?cat=85&item=13:116) (viewed 23/06/03)

55 for more information on CPB Twyford go to [www.cpb-twyford.co.uk/](http://www.cpb-twyford.co.uk/) (viewed 23/06/03)

56 [www.advantacorn.com](http://www.advantacorn.com)  
[www.gaarstseed.com](http://www.gaarstseed.com)  
[www.interstateseed.com](http://www.interstateseed.com) (viewed 07/06/03)

57 'Advanta: Worldwide Challenges' Jos Bijman in AgBioForum -vol 4, No 1, p34-39 available online at [www.agbioforum.org/v4n1/v4n1a06-bijman.htm](http://www.agbioforum.org/v4n1/v4n1a06-bijman.htm) (viewed 07/06/03)

58 'Advanta: Worldwide Challenges' Jos Bijman in AgBioForum -vol 4, No 1, p34-39 available online at [www.agbioforum.org/v4n1/v4n1a06-bijman.htm](http://www.agbioforum.org/v4n1/v4n1a06-bijman.htm) (viewed 07/06/03)

#### Seed Companies in the UK

Of the three companies leading the push for GM crop commercialisation in the UK, Bayer CropScience have invested least in UK (and European) seed companies.

#### Nunhems/Nunza BV

Bayer CropScience owns the Nunza group of vegetable seed companies.<sup>51</sup> This includes subsidiaries Sun Seeds, Nunhems Seeds and Hild (who also produce organic vegetable seeds)

#### KWS and CPB Twyford

Bayer CropScience own a 15% stake in German plant breeder KWS.<sup>52</sup> KWS are primarily a sugar beet breeder. KWS have a majority (81%) holding in the plant breeders Lochow-Petkus,<sup>53</sup> who in turn own a 74%<sup>54</sup> stake in UK cereal and oilseed breeders CPB Twyford.<sup>55</sup>

#### Seed companies and the commercialisation of GM crops in the UK

Should any of Bayer's GM crops be commercialised in the UK it is likely that it would have to seek a partnership with one or more seed companies to market its products to farmers. In the case of Bayer's GM fodder maize varieties, such a seed partner could well be Advanta Seeds. Advanta currently sell LibertyLink crops in the US and Canada.<sup>56</sup> Advanta also carried out much of the initial research and development for Bayer's GM maize varieties Chardon LL and Sheridan.<sup>57</sup> These varieties were based on conventional fodder maize varieties owned by Advanta, with the addition of the T25 construct which gives resistance to glufosinate ammonium (owned by AgrEvo, now Bayer CropScience). In May 2000, following the commercial failure of Chardon LL in the Netherlands, Advanta sold the plant breeders' rights for both Chardon LL and Sheridan back to Bayer CropScience (then Aventis CropScience) claiming that its prospects for commercial success were too low given the public rejection of GM crops in Europe.<sup>58</sup> Should the UK government give the go ahead for the commercial growing of GM crops it is thought likely that Advanta would be the best placed seed company through which Bayer CropScience could market its GM maize seed to UK farmers.

### 3.3 Europe

#### EU field trials

Since the early 1990's Bayer CropScience's precursor companies Aventis CropScience, AgrEvo (Hoescht/Schering), Rhône-Poulenc, PGS, and Nunhems have also carried out field trials of GM crops across the EU. These trials have taken place in Belgium, Denmark, Finland, France, Germany, Greece, Italy, the Netherlands, Portugal Spain and Sweden. The

trials have predominantly focused on sugar beet, maize and oilseed rape modified for the following traits, either singularly or in combination: herbicide tolerance (LibertyLink), male sterility/fertility restorer hybrid technology (SeedLink), insect resistance and fungal resistance. A smaller number of trials have been conducted on chicory, cotton, potatoes, rice, tobacco, tomatoes and water melons. Other GM traits used in some of these trials have included virus resistance, altered processing and yield characteristics, and altered composition and starch content. A number of other companies including Advanta, Bejo Zaden, KWS, Limagrain and Pioneer have also used LibertyLink and/or SeedLink traits in their own GM crop trials.

(An overview of Bayer's EU and UK field trials can be found by doing a company search for Aventis, on the Genewatch UK online database at [www.genewatch.org/GeneSrch/default.htm](http://www.genewatch.org/GeneSrch/default.htm). More detailed information on Bayer's UK GM crop field trials can be found online on the DEFRA web site at [www.defra.gov.uk/environment/gm/pdf/exper.pdf](http://www.defra.gov.uk/environment/gm/pdf/exper.pdf). Further information on its EU GM crop trials can be found online at the Robert Koch Institute website [www.rki.de/GENTEC/GENENG/GENTEC\\_E.HTM](http://www.rki.de/GENTEC/GENENG/GENTEC_E.HTM) and the European Union Joint Research Centre web site at <http://biotech.jrc.it/>)

### EU Part C marketing consents

As well as the various applications submitted by Bayer CropScience for the cultivation within the EU of the various oilseed rape varieties outlined above, Bayer CropScience have also applied to Part C consent for import only of T45 (LibertyLink) oil seed rape and A270+A5547-127 (LibertyLink) soya.<sup>59</sup>

### Central and eastern Europe field trials

A review of GM field trials in central and eastern European states indicates that Bayer (Aventis CropScience) have been involved in trials of LibertyLink maize (Bulgaria), LibertyLink oilseed rape (Poland and Ukraine), SeedLink oilseed rape (Czech), LibertyLink sugar beet (Hungary and Ukraine) and Bt (insect resistant) maize (Hungary).<sup>60</sup>

Several other companies operating in central and eastern Europe including Pioneer, KWS, Novum and Force Limagrain have carried out field trials of GM crops using Bayer's LibertyLink technology.<sup>61</sup>

## 4. Future GM Crops

Bayer CropScience's immediate product pipeline is focused on expanding its LibertyLink and SeedLink traits to a wider range of commodity crops. Future LibertyLink crops include cotton (2003 launch in US),<sup>62</sup> rice,<sup>63</sup> soya,<sup>64</sup> sugar beet,<sup>65</sup> and wheat.<sup>66</sup>

As GM crops have generally first been commercialised in the US it is worth looking at Bayer's field trials there to get an idea of its immediate product pipeline. Between 2002 and 2003 in the US, Bayer/Aventis CropScience have made applications for field trials of GM cotton, maize, potato, oilseed rape, rice and soya. The majority of these crops have been modified for input traits, i.e. herbicide tolerance (both LibertyLink and Isoxazole tolerance), fungal resistance or insect resistance, either as a single trait or in combination, as multiple stacked traits. Bayer have also conducted a smaller number of trials of crops modified for altered carbohydrate metabolism. Trials of LibertyLink cotton, LibertyLink/insect resistant cotton, LibertyLink maize, Isoxazole tolerant maize, LibertyLink/Isoxazole tolerant maize and LibertyLink/insect resistant maize are being conducted on the largest scale and therefore appear to be in the most advanced stages of development.<sup>67</sup>

## 5. Recent Financial History and Corporate Stability

Unlike Monsanto and Syngenta, which are stand-alone agricultural companies, Bayer CropScience is owned by a larger parent company Bayer AG. Any analysis of the financial stability of Bayer CropScience therefore needs to undertaken within an analysis of the company as a whole.

The last few years have been a financial nightmare for Bayer AG. 2001 saw the withdrawal of two of its key pharmaceutical products Kogenate (an anti-haemophilia drug in January 2001) and Lipobay/Baycol (an anti-cholesterol drug in August 2001). Over 100 deaths have since been linked to Lipobay/Baycol and Bayer's share price fell dramatically after its withdrawal. Bayer's

59 [http://gmoinfo.jrc.it/gmc\\_browse.asp](http://gmoinfo.jrc.it/gmc_browse.asp) (viewed 03/07/03)

60 'Review of GMOs under research and development and in the pipeline in Europe', March 2003, European Science and Technology Observatory (EU).

61 'Review of GMOs under research and development and in the pipeline in Europe', March 2003, European Science and Technology Observatory (EU).

62 Bayer CropScience 'Cotton Experts' website available online at [www.cottonexperts.com/m03/m03040601.html](http://www.cottonexperts.com/m03/m03040601.html) (viewed 18/06/03)

63 p86 of 'Agrow Reports: Genetically Modified Crops 2-Genetic Engineering for Herbicide Tolerance' by Dr LG Copping, 13.11.98, PJB publications Ltd

64 'European GMO deliberate release and novel foods legislation: Consents and pending applications, including UK opinions', table 2, available online at [www.defra.gov.uk/environment/gm/pdf/euconsent.pdf](http://www.defra.gov.uk/environment/gm/pdf/euconsent.pdf) (viewed 07/06/03)

65 p86 of 'Agrow Reports: Genetically Modified Crops 2-Genetic Engineering for Herbicide Tolerance' by Dr LG Copping, 13.11.98, PJB publications Ltd

66 p86 of 'Agrow Reports: Genetically Modified Crops 2-Genetic Engineering for Herbicide Tolerance' by Dr LG Copping, 13.11.98, PJB publications Ltd

67 for information on US GM field trials go to [www.nbiap.vt.edu/cfdocs/fieldtests1.cfm](http://www.nbiap.vt.edu/cfdocs/fieldtests1.cfm)

share price has staged a partial recovery since spring 2003 when the company won two of the court cases relating to deaths/injuries linked to Lipobay/Baycol, and managed to settle more compensation claims out of court.<sup>68</sup> However, the company still faces in the region of 8000 Lipobay law suits and may still have to pay out billions of dollars in compensation.<sup>69</sup> Sales for 2002 were down 2.2% compared to 2001.<sup>70</sup>

In terms of its business interests Bayer is a bit of a dinosaur. It is the only remaining company to have hung on to something resembling the 'Life Science' concept, having pharmaceutical, chemical, polymers and agricultural activities all within one company. All other similar companies (Monsanto, Novartis, AstraZeneca, DuPont etc) have become more focused in recent years, shedding one or more of their business areas. Bayer has so far resisted considerable pressure to follow suit. The company has recently separated these activities into four legally separate business units owned by Bayer AG as a holding company. It is possible that should Bayer's financial position not improve dramatically it might be forced to sell one or more of its business units. Bayer has recently been searching for a partner or even a buyer for its pharmaceutical business, but with no success.<sup>71</sup>

It is difficult to comment on the stability/viability of Bayer CropScience on its own as it is such a new company. The consolidation of the agricultural interests of Bayer and Aventis has created the largest agrochemicals company in the world.<sup>72</sup> It is second only to Syngenta in terms of global agricultural sales. The CropScience business is currently one of the most profitable areas within Bayer AG and is therefore likely to remain within the company.

## 6. How important are GM crops to Bayer?

GM crops, whilst only responsible for a small percentage of Bayer CropScience's current sales, are certainly key to its future plans. One of the main reasons for Bayer's purchase of Aventis CropScience was the possibility of buying an established GM crops business with products both on the market and close to commercialisation, and its research and development capabilities. However, at present (and in the short to medium term), the vast majority of its income comes from sales of agrochemicals.

Of all the companies involved with GM crops, Bayer CropScience has most to lose should the commercialisation of first generation GM crops fail in the UK and the EU. It (and its precursor companies) have invested a lot of time and money in GM crops in the UK and their commercial failure would be a serious blow for the company. However, such a failure would not necessarily mark the end of the company, or its involvement in GM crops. Bayer CropScience can rely on its agrochemical products as well as existing markets for its GM products in Canada and the US, and the possibility of new markets in India and Australia. Bayer itself has suggested that it would take its GM crops elsewhere if commercialisation were to fail in the UK

'If, when it comes down to it, people in the UK do not want it [GM] and farmers are not allowed to buy it, then we'll stick to those countries that do wish to grow the stuff and do wish to benefit from growing it.'<sup>73</sup>

## 7. Strategy

In the UK, Bayer (along with Monsanto and Syngenta), have been forced into playing a waiting game as a result of public opposition to GM crops. During the period of the government backed farmscale trials Bayer (and AgrEvo/Aventis CropScience before it) have learnt from the mistakes made by Monsanto in its ill-fated PR campaign in 1998, and have managed to keep a fairly low public profile. The company has avoided major public confrontation over GM crops by adopting what has been for the most part a responsive rather than pro-active public relations strategy. Instead of fiercely promoting GM crops its position has been simply to respond to criticism. Whilst the company has always supported prosecutions against anti-GM activists accused of damaging its field trials, it has not sought publicity around these court cases.

Bayer CropScience (and its precursors) helped to set up UK GM crops industry platforms and front groups such as CropGen and the Agricultural Biotechnology Council (ABC). As the farmscale trials come to an end, the public debate is launched and the

68 'Bayer strengthens full-year forecast' by Bettina Wassener, Financial Times, 25/04/03

69 'Bayer strengthens full-year forecast' by Bettina Wassener, Financial Times, 25/04/03

70 Bayer AG annual report available online at [www.bayer.com/annualreport2002/](http://www.bayer.com/annualreport2002/) (viewed 07/06/03)

71 'Bayer supervisory board divided over pharmaceutical strategy (Widerstand im Bayer-Aufsichtsrat gegen Pharma-Strategie)' by Klaus-Max Smolka, Financial Times Deutschland; 06/12/02  
'Bayer shares rise on bid talk reports' By Uta Harnischfeger and Patrick Jenkins, Financial Times 18/11/02

'Bayer raises hopes of finding partner' By Uta Harnischfeger and Bettina Wassener in Frankfurt, Financial Times; 13/11/02  
72 based on table 4, page 11 of 'GM Crops-going against the grain' Action Aid, May 2003 available online at [www.actionaid.org/resources/pdfs/gatg.pdf](http://www.actionaid.org/resources/pdfs/gatg.pdf) (viewed 07/06/03)

73 Julian Little, Spokesperson for Bayer Crop Science, Farming Today, BBC Radio 4, 20th May 2003

possible commercial growing of GM crops becomes imminent, Bayer (along with other companies) are becoming more vocal. However, rather than making statements as a company it is increasingly using the ABC as a convenient third party platform through which to make comments on GM crops issues without having its corporate name attached to them. For example, letters to newspapers written by Paul Rylott are often attributed to him in his role as acting chair of the ABC rather than as head of Bayer BioScience UK.<sup>74</sup>

One of the few interest groups that Bayer CropScience seem to have been courting active engagement is beekeepers. Bayer CropScience have had stalls at recent UK bee keeping events.<sup>75</sup>

Whilst Bayer CropScience (and AgrEvo/Aventis CropScience before it) have been fairly quiet in public it is likely that behind the scenes its lobbying activities have put considerable pressure on the UK government to develop favourable policies on GM crops.

74 'See high-quality science of genetically modified crop research at first hand', Paul Rylott letter to Financial Times 04/06/03, available online at [www.scientific-alliance.com/news\\_archives/gmos/seehighquality.htm](http://www.scientific-alliance.com/news_archives/gmos/seehighquality.htm) (viewed 25/06/03) and see also 'Questions over GM trials' in the Guardian, 14/04/03 available online at [www.guardian.co.uk/letters/story/0,3604,936221,00.html](http://www.guardian.co.uk/letters/story/0,3604,936221,00.html) (viewed 25/06/03)

75 Bayer CropScience UK website available online at [www.bcsbioscience.co.uk/include.asp?sec=23&con=198](http://www.bcsbioscience.co.uk/include.asp?sec=23&con=198) (Viewed 07/07/03)

## Appendix 1: UK Locations

### **Bayer plc/Bayer AG**

Bayer House, Strawberry Hill,  
Newbury  
Berkshire RG14 1JA  
tel: +44 (0)1635 563000  
fax: +44 (0)1635 563393  
corporate.communications@bayer.co.uk  
UK headquarters of parent company

### **Bayer Crop Science**

Bayer CropScience, (new UK  
headquarters)  
Cambridge Rd., Hauxton, Cambridge,  
Cambridgeshire, CB2 5HU.  
Tel: 01223 870 312  
Fax: 01223 872 142  
www.bayercropscience.co.uk  
www.bcsbioscience.co.uk

Offices and agrochemical production  
facility, registered offices for Bayer  
ACI Ltd, Bayer ACP Ltd, Bayer ACSH  
Ltd, Bayer AEH Ltd, Bayer AGCO Ltd,  
Bayer CropScience Ltd, Bayer  
CropScience Holdings Ltd and Bayer  
Nufarm Ltd.<sup>76</sup>

Bayer CropScience,  
Sweet Briar Road, Norwich, Norfolk,  
NR6 5AP  
Tel: 01603 242424  
Agrochemical production facility

Bayer CropScience,  
Whiffen Works, Gorseley lane, Widnes,  
Cheshire, WA8 0RN  
Tel: 0151 4245681  
Fax: 0151 420 4355  
Agrochemical production facility

Bayer CropScience,  
Cliffe Road, North Newbald, North  
Yorkshire, YO43 4TY  
Tel: 01430 827747

Aventis CropScience  
Fyfield Road, Ongar, Essex, CM5 0HW  
Tel: 01277 301301

Former Aventis CropScience facility  
(either closed or in the process of  
closing)

### **Seed Companies**

(UK seed companies with at least  
partial ownership by Bayer  
CropScience)

Nunhems Seeds UK  
The Barn, Castle Rising - King's Lynn,  
Norfolk PE31 6AG United Kingdom  
Phone +44 1553 631151  
Fax +44 1553 631874  
www.nunhems.com

CPB Twyford Ltd,  
56 Church Street, Thriplow, Royston,  
Herts SG8 7RE  
www.cpb-twyford.co.uk

## Appendix 2: UK Directors

Bayer CropScience Ltd<sup>77</sup> registered  
offices at Hauxton

Martyn Hargraves (company  
secretary)  
Lambert Courth  
Michael O'Brien  
Dr Joachim Schneider  
Wolfgang Welter

## Appendix 3: Global Locations

World Headquarters  
Bayer AG  
Global headquarters, 51368  
Leverkusen Germany  
+49-(0)214 / 30-1  
www.bayer.com

Bayer CropScience (World  
Headquarters)  
Bayer CropScience AG, Alfred-Nobel-  
Str. 50, D-40789 Monheim am Rhein  
Germany  
+49 (0) 21 73 - 38-0  
www.bayercropscience.com

## Appendix 4: Board of Management

### **Bayer CropScience AG**

Dr. Jochen Wulff (chairman)  
Dr. Esmail Zirakparvar (business  
operations)  
Dr. Bernward Garthoff (technology)  
Willy Scherf (labor director)

### **Bayer AG**

Werner Wenning (Chairman of the  
Board of Management)  
Currently also director of Gerling  
Konzern Versicherungsbeteiligungs-  
AG and Henkel KGaA Klaus Kühn)  
Dr. Udo Oels  
Dr. Richard Pott

## Appendix 5: Key Bayer CropScience employees in the commercialisation of GM crops in the UK

### **Dr Paul Rylott (Head of UK BioScience unit)**

Acting chairman of the Agricultural  
Biotechnology Council (ABC) and sits  
on the board of the government  
advisory body Agriculture and  
Environment Biotechnology  
Commission (AEBEC),<sup>78</sup> member of the  
GM Public Debate Steering Board,  
representative to the Supply Chain  
Initiative on Modified Agricultural  
Crops (SCIMAC) and representative  
to the British Society of Plant  
Breeders (BSPB).

### **Judith K Rylott (formerly Jordan) (Head of product development)**

Often appears as an expert witness  
on behalf of Bayer CropScience in  
court cases

### **Julian Little (Public Affairs Manager)**

Frequently a spokesperson for Bayer  
CropScience and does information  
stalls for it at events

## Appendix 6: Lobbying

### **Lobby Groups**

Bayer CropScience are involved with  
the following industry lobby groups.  
For more information on each of these  
groups see the forthcoming Corporate  
Watch briefing 'An Over View of the  
GM crops Industry in the UK'

### **Agricultural Biotechnology Council (ABC)**

www.abcinformation.org/

### **CropGen** www.cropgen.org

Crop Protection Association  
www.baa.org.uk/

### **British Society of Plant Breeders (BSPB)** www.bspb.co.uk

**SCIMAC** (Supply Chain Initiative on  
Modified Agricultural Crops)  
www.ukasta.org.uk/news/scimac/

### **Agricultural Biotechnology In Europe (ABE)** www.abeeurope.info

**Europabio** (European Association for  
Bioindustries) www.europabio.org

### **European Crop Protection Association (ECPA)** www.ecpa.be

## Appendix 7: Further sources of information

The following publications and web  
sites are interesting independent  
sources of information on Bayer AG  
and Bayer CropScience

### **Bayer Hazard**

www.bayerhazard.com  
Activist website focusing on Bayer  
CropScience

**CBG Network** www.cbgnetwork.org  
Formerly known as Bayerwatch the  
CBG network have been monitoring  
the activities of Bayer for over 20  
years. Their web site includes an  
archive of their newsletter and press  
releases.

<sup>76</sup> Companies House website available online at  
http://ws1info.companieshouse.gov.uk (viewed 26/  
06/03)

<sup>77</sup> Companies House Bayer CropScience Annual  
Return (filed 17/05/03)

<sup>78</sup> AEBEC 'Membership Details' web page available  
online at www.aebc.gov.uk/aebc/about/  
member.shtml (viewed 07/06/03)



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**Also available in this series:**

The 'Biotech Family Tree 2003' A2 poster,  
Company Briefings on Monsanto and Syngenta, and an overview briefing on the GM crops Industry in the UK.

For further copies contact Corporate Watch at the address below.  
Downloadable versions of all of these briefings are available at  
[www.corporatewatch.org.uk](http://www.corporatewatch.org.uk) under 'genetics'.

**About Corporate Watch**

Corporate Watch is an independent UK based research group, which works to expose the mechanisms by which corporations operate and the detrimental effects that they have on society and the environment. We have a website which includes detailed profiles of corporations and lobby groups in a variety of industry areas, as well as regular news updates covering corporate and campaign news, analytical articles and book reviews.

Current areas of research include:

GM crops, the PR industry, the Peat industry and Corporate Structures.

For more information contact:

Corporate Watch

16B Cherwell Street, Oxford, OX4 1BG, UK.

Tel: 01865 791391

[mail@corporatewatch.org](mailto:mail@corporatewatch.org)

[www.corporatewatch.org.uk](http://www.corporatewatch.org.uk)