

# Diskurs „Grüne Gentechnik“, Internetquellen und Literatur zum Basisreader

## Bereich Naturwissenschaft

### 1. INTERNETPORTALE- UND -SEITEN

Eine Reihe von Internetseiten zur Gen- und Biotechnologie enthält Informationen zu verschiedenen Themenbereichen und lassen sich daher nicht einem bestimmten Kapitel des Readers zuordnen. Diese Seiten finden sich im ersten Abschnitt.

Die Zahl informativer und kompetenter Internetseiten zum Thema Gen- und Biotechnologie ist groß und wächst überdies ständig. Die folgende Liste stellt eine Auswahl dar und erhebt keinesfalls den Anspruch, umfassend zu sein.

#### 1.1 Portale und Seiten mit Informationen zu verschiedenen Themen

##### Internationale (englischsprachige) Webseiten:

<http://www.agbios.com/default.asp> - *Agriculture & Biotechnology Strategies Inc.*

(**AGBIOS** – die Internetseite der kanadische Firma Agbios, die detaillierte Informationen zu gentechnisch veränderten Nutzpflanzen zur Verfügung stellt. Die Seite enthält u.a. umfangreiche Beschreibung der in OECD-Ländern deregulierten *Events (crop database)*).

<http://www.biotech-info.net> - **AG Biotech Infonet**, eine unabhängige Informationsseite mit vielen sowohl gentechnik-kritischen als auch -befürwortenden Beiträgen. Viele Studien und Originalquellen lassen sich über diese Seite downloaden.

<http://www.isb.vt.edu> - *Information Systems for Biotechnology (ISB)* – Informationen, Dokumente und Datenbanken über gentechnisch veränderte Pflanzen, Tiere und Mikroorganismen.

<http://www.usda.gov/agencies/biotech/index.html> - Biotech-Internetseite der **USDA** (*The United States Department of Agriculture*), eine der drei staatlichen US-Behörden (außerdem EPA/*Environmental Protection Agency* und FDA/*Food and Drug Administration*) die für die Regulierung gentechnisch erzeugter Produkte zuständig sind.

<http://binas.unido.org/binas/home.php3> - Internetseite des *Biosafety Information Network and Advisory Service (BINAS)* – ein Informationsservice der *United Nations Industrial Development Organization (UNIDO)*. Die BINAS-Seite enthält Informationen zur Regulierung der Nutzung gentechnisch veränderter Pflanzen bzw. aus ihnen erzeugter Produkte in Industrie- und Entwicklungsländern.

<http://www.isaaa.org> - *International Service for the Acquisition of Agri-Biotech Applications (ISAAA)* – eine internationale, nicht-profit orientierte Organisation, die den Transfer bio- und gentechnischer Methoden zur Erzeugung landwirtschaftlicher Produkte aus Industriestaaten in Entwicklungsländer unterstützt und fördert.

<http://www.fao.org/biotech> - Internetseite der *Food and Agriculture Organization (FAO)* zur Biotechnologie.

<http://www.uspto.gov/patft/index.html> -, *Patent Full-Text and Full-Page Image-Datenbank des United States Patent and Trademark Office.*

### **Deutschsprachige Webseiten mit Informationen zur Grünen Gentechnik:**

[www.transgen.de](http://www.transgen.de)

<http://www.biogum.uni-hamburg.de>

<http://www.internutrition.ch>

<http://www.gensuisse.ch/index.html>

<http://www.oeko.de/indexb.html>

<http://www.geneticdiner.com/index.htm>

<http://www.science-live.de/index.html>

<http://www.umweltministerium.bayern.de/bereiche/gentech/gentech.htm>

<http://www.i-s-b.org>

### **1.2 Seiten zur Biodiversität**

<http://www.biodiv.org> - offizielle Homepage der *Convention on Biological Diversity (CBD)*

<http://www.biologischevielfalt.de> - Seite des Bundesministeriums für Umwelt, Naturschutz und Reaktorsicherheit zur Biodiversität

<http://www.biodiv-net.de> Plattform zum Wissensmanagement über Biologische Vielfalt in Deutschland

<http://www.fao.org/biodiversity/index.asp> Seite der Food and Agriculture Organization (**FAO**) zur Biodiversität

<http://europa.eu.int/scadplus/leg/de/lvb/l28037.htm> - Aktionsplan der EU zur Erhaltung der biologischen Vielfalt im Rahmen der Wirtschafts- und Entwicklungszusammenarbeit

[http://www.foe.co.uk/resource/reports/impacts\\_glufosinate\\_ammon.pdf](http://www.foe.co.uk/resource/reports/impacts_glufosinate_ammon.pdf) - Studie der „Friends of the Earth“ (Topsy Jewell and David Buffin) zur Umweltverträglichkeit des Herbizids Glufosinat-Ammonium

[http://www.foe.co.uk/resource/reports/impacts\\_glyphosate.pdf](http://www.foe.co.uk/resource/reports/impacts_glyphosate.pdf) - - Studie der „Friends of the Earth“ (David Buffin and Topsy Jewell) zur Umweltverträglichkeit des Herbizids Glyphosat

<http://www.agric.wa.gov.au/cropupdates/2000/weeds/Powles.htm> - Glyphosat-resistente Formen (*Lolium rigidum*, *Eleusine indica*)

<http://www.biosci.ohio-state.edu/~lspencer/home.html> - The Plant Population Ecology Lab, Allison Snow: *We study natural selection and ecological processes within plant*

*populations, including pollination biology, plant-herbivore interactions, conservation biology, and the dynamics of gene flow (especially involving transgenic plants).*

<http://www.agbios.com/articles/searsreport.pdf> - **AGBios**-Seite zur Gefährdung des Monarchfalters durch insektenresistente Maissorten.

<http://www.biogum.uni-hamburg.de/agbiosich/uba10/uba1002.htm#22> - **BIOGUM**-Seite zur Verwendung von Virus-Sequenzen in gentechnisch veränderten Pflanzen.

[http://www.biotech-info.net/gene\\_flow.html](http://www.biotech-info.net/gene_flow.html) - Seite des **AG-Biotech-Infonet** zum vertikalen und horizontalen Gentransfer.

### **1.3 Seiten zur Kulturpflanzenvielfalt, Agrobiodiversität und Sortenschutz**

<http://www.vielfalt.net/index5de.html> (**NABU**: Ökologische Pflanzenzüchtung und Biologische Vielfalt von Kulturpflanzen)

<http://www.worldseed.org/assinsel.html> - **ASSINSEL**, der internationale Verband der Pflanzenzüchter zum Schutz von Pflanzensorten, wurde 1938 gegründet. Gegenwärtig besteht der Verband aus 45 einzelnen Organisationen aus 30 Industrie- und Entwicklungsländern, die sich mit Pflanzenzucht befassen und die ihrerseits über 1000 Unternehmen in der Welt vertreten. ASSINSEL vertritt viele verschiedene Gruppierungen und Tätigkeiten, deren gemeinsames Bestreben darauf gerichtet ist, die Bedeutung und den Wert der Tätigkeit der Pflanzenzüchter in der weltweiten Landwirtschaft zur Geltung zu bringen und zu fördern.

<http://www.gtz.de/agrobiodiv/u-blick/u-blick.htm#3> - Seite der **GTZ**, Sicherung der Agrobiodiversität im ländlichen Raum.

<http://www.upov.int> - *The International Union for the Protection of New Varieties of Plants (UPOV) is an intergovernmental organization with headquarters in Geneva (Switzerland). It is based on the International Convention for the Protection of New Varieties of Plants, as revised since its signature in Paris on December 2, 1961. The objective of the Convention is the protection of new varieties of plants by an intellectual property right.*

<http://www.bundessortenamt.de/internet20> - Das Bundessortenamt (**BSA**) ist als selbständige Bundesoberbehörde im Geschäftsbereich des Bundesministeriums für Verbraucherschutz, Ernährung und Landwirtschaft für die Zulassung und für den Sortenschutz von Pflanzensorten und die damit zusammenhängenden Angelegenheiten zuständig.

### **1.4 Seiten zu den Auswirkungen des Anbaus gentechnisch veränderter Sorten auf den Einsatz von Pestiziden**

<http://www.ncfap.org> - National Center for Food and Agricultural Policy (NCFAP): *A private non-profit non-advocacy research organization. Originally established in 1984 at Resources for the Future with a grant from the Kellogg Foundation, the Center became an independent organization in 1992. NCFAP researchers conduct studies in four program areas: biotechnology, pesticides, US farm and food policy and international trade and development.*

<http://www.usda.gov/nass> - USDA, National Agricultural Statistics Service

<http://www.ers.usda.gov/publications/aer786/aer786.pdf> - Fernandez-Cornejo & McBride (2000), Studie des Economic Research Service, USDA

<http://www.biotech-info.net/troubledtimes.html> - Seite des **AG-Biotech-Infonet** zu den Studien von Charles M. Benbrook (Northwest Science and Environmental Policy Center, Sandpoint Idaho, 2001)

<http://www.panda.org/resources/publications/water/cotton/transgenic.html> Thalmann und Küng (2000), Studie für den WWF

<http://www.checkbiotech.org/pdf/btworlddevrev.pdf> - *Department of Agricultural, Food, and Resource Economics* (Pray & Ma, Rutgers University, New Brunswick, NJ, USA) und des *Center for Chinese Agricultural Policy* (Huang & Qiao, Chinese Academy of Sciences, Beijing, China)

## 1.5 Seiten zum Thema „Grüne Gentechnik und Gesundheit“

<http://www.fao.org/waicent/faoinfo/economic/esn/biotech/tabconts.htm> - Biotechnology and Food Safety, Report of a Joint **FAO/WHO** Consultation 1996

<http://www.who.int/fsf/GMfood/index.htm> - Seite der **WHO** zum Thema "Foods derived from Modern Biotechnology"

<http://www.cfsan.fda.gov/~lrd/biotechm.html> - U. S. Food and Drug Administration (**FDA**), Center for Food Safety and Applied Nutrition, Seite zur Biotechnologie

[http://www.biotech-info.net/HGF\\_abstracts.html](http://www.biotech-info.net/HGF_abstracts.html) - Seite der AG-Biotech-Infonet zum Thema "Gene Transfer to Gut Microbes"

<http://europa.eu.int/comm/research/quality-of-life/gmo/index.html> - *This website provides a comprehensive review of the results of EC-supported research into the safety of Genetically Modified Organisms. It presents research carried out under successive EC Framework Programmes for Research and Technological Development from 1985 (Biotechnology Action Programme) to 2000 (Fifth Framework Programme).*

## 2 LITERATUR

### 2.1 Biodiversität

#### 2.2.1 Komplementärherbizide Glyphosat und Glufosinat

Baylis AD. Why glyphosate is a global herbicide, strengths, weaknesses and prospects. *Pest Management Science*. 56(4), 299-308 (2000)

#### Toxizität:

Barbosa ER. da Costa MDL. Bacheschi LA. Scaff M. Leite CC. Parkinsonism after glycine-derivate exposure. *Movement Disorders*. 16(3), 565-568 (2001)

Daruich J. Zirulnik F. Gimenez MS. Effect of the herbicide glyphosate on enzymatic activity in pregnant rats and their fetuses. *Environmental Research*. 85(3), 226-231 (2001)

Ohtake T. Yasuda H. Takahashi H. Goto T. Suzuki K. Yonemura K. Hishida A. Decreased plasma and cerebrospinal fluid glutamine concentrations in a patient with bialaphos poisoning. *Human & Experimental Toxicology*. 20(8), 429-434 (2001)

### **Umweltwirkung:**

Buckmann H. Petersen J. Schlinker G. Marlander B. Weed control in genetically modified sugar beet - two year experiences of a field trial series in Germany. *Zeitschrift für Pflanzenkrankheiten und Pflanzenschutz-Journal of Plant Diseases & Protection*. (Special Issue S7), 353-362 (2000)

Grunewald K. Schmidt W. Unger C. Hanschmann G. Behavior of glyphosate and aminomethylphosphonic acid (AMPA) in soils and water of reservoir Radeburg II catchment (Saxony/Germany). *Journal of Plant Nutrition & Soil Science-Zeitschrift für Pflanzenernährung und Bodenkunde*. 164(1), 65-70 (2001)

Wauchope RD. Estes TL. Allen R. Baker JL. Hornsby AG. Jones RL. Richards RP. Gustafson DI. Predicted impact of transgenic, herbicidetolerant corn on drinking water quality in vulnerable watersheds of the mid-western USA. *Pest Management Science*. 58(2), 146-160 (2002)

Muller BP. Zumdick A. Schuphan I. Schmidt B. Metabolism of the herbicide glufosinate-ammonium in plant cell cultures of transgenic (rhizomania-resistant) and non-transgenic sugarbeet (*Beta vulgaris*), carrot (*Daucus carota*), purple foxglove (*Digitalis purpurea*) and thorn apple (*Datura stramonium*). *Pest Management Science*. 57(1), 46-56 (2001)

Pline WA. Wilcut JW. Duke SO. Edmisten KL. Wells R. Tolerance and accumulation of shikimic acid in response to glyphosate applications in glyphosate-resistant and nonglyphosate-resistant cotton (*Gossypium hirsutum* L.). *Journal of Agricultural & Food Chemistry*. 50(3), 506-512 (2002)

Termorshuizen AJ. Lotz LAP. Does large-scale cropping of herbicide-resistant cultivars increase the incidence of polyphagous soil-borne plant pathogens?. *Outlook on Agriculture*. 31(1), 51-54 (2002)

### **Nachweisverfahren:**

Borjesson E. Torstensson L. New methods for determination of glyphosate and (aminomethyl)phosphonic acid in water and soil. *Journal of Chromatography*. 886(1-2), 207-216 (2000)

Goodwin L. Hanna M. Startin JR. Keely BJ. Goodall DM. Isotachophoretic separation of glyphosate, glufosinate, AMPA and MPP with contactless conductivity detection. *Analyst*. 127(2), 204-206 (2002)

- Grey L. Nguyen B. Yang P. Liquid chromatography/electrospray ionization/isotopic dilution mass spectrometry analysis of n-(phosphonomethyl) glycine and mass spectrometry analysis of aminomethyl phosphonic acid in environmental water and vegetation matrixes. *Journal of AOAC International*. 84(6), 1770-1780 (2001)
- Hori Y. Fujisawa M. Shimada K. Hirose Y. Determination of glufosinate ammonium and its metabolite, 3-methylphosphinicopropionic acid, in human serum by gas chromatography-mass spectrometry following mixed-mode solid-phase extraction and t-BDMS derivatization. *Journal of Analytical Toxicology*. 25(8), 680-684 (2001)
- Dubbin WE. Sposito G. Zavarin M. X-ray absorption spectroscopic study of Cu-glyphosate adsorbed by microcrystalline gibbsite. *Soil Science*. 165(9), 699-707 (2000)
- Kudzin ZH. Gralak DK. Drabowicz J. Luczak J. Novel approach for the simultaneous analysis of glyphosate and its metabolites. *Journal of Chromatography*. 947(1), 129-141 (2002)
- Royer A. Beguin S. Sochor H. Communal PY. Determination of glufosinate ammonium and its metabolite (AE F064619 and AE F061517) residues in water by gas chromatography with tandem mass spectrometry after ion exchange cleanup and derivatization. *Journal of Agricultural & Food Chemistry*. 48(11), 5184-5189 (2000)
- Royer A. Beguin S. Tabet JC. Hulot S. Reding MA. Communal PY. Determination of glyphosate and aminomethylphosphonic acid residues in water by gas chromatography with tandem mass spectrometry after exchange ion resin purification and derivatization. Application on vegetable matrixes. *Analytical Chemistry*. 72(16), 3826-3832 (2000)

### **resistente Unkräuter:**

- Lapointe L. Rochefort L. Weed survey of lowbush blueberry fields in Saguenay-Lac-Saint-Jean, Quebec, following eight years of herbicide application. *Canadian Journal of Plant Science*. 81(3), 471-478 (2001)
- Lee LJ. Ngim J. A first report of glyphosate-resistant goosegrass (*Eleusine indica* (L) Gaertn) in Malaysia. *Pest Management Science*. 56(4), 336-339 (2000)
- Weaver SE. The biology of Canadian weeds. *Conyza canadensis*. *Canadian Journal of Plant Science*. 81(4), 867-875 (2001)

### **2.2.2 Ausbreitung von Transgenen**

- Ammann K, Jacot Y, Al Mazyad PR. Weediness in the light of new transgenic crops and their potential hybrids. *Journal of Plant Diseases & Protection (Special Issue S7)*, 19-29 (2000)

- Arriola PE, Ellstrand NC. Crop-to-weed gene flow in the genus sorghum (Poaceae) - spontaneous interspecific hybridization between johnsongrass, *Sorghum halepense*, and crop *Sorghum s-bicolor*. *American Journal of Botany* 83(9), 1153-1159 (1996)
- Arriola PE, Ellstrand NC. Fitness of interspecific hybrids in the genus sorghum - persistence of crop genes in wild populations. *Ecological Applications* 7(2), 512-518 (1997)
- Bartsch D, Brand U, Morak C, Pohl-Orf M, Schuphan I, Ellstrand NC. Biosafety of hybrids between transgenic virus-resistant sugar beet and Swiss chard. *Ecological Applications* 11(1), 142-147 (2001)
- Bartsch D, Ellstrand NC. Genetic evidence for the origin of Californian wild beets (genus *Beta*). *Theoretical & Applied Genetics* 99(7-8), 1120-1130 (1999)
- Bartsch D, Lehnen M, Clegg J, Pohl-Orf M, Schuphan I, Ellstrand NC. Impact of gene flow from cultivated beet on genetic diversity of wild sea beet populations. *Molecular Ecology* 8(10), 1733-1741 (1999)
- Dyer WE. Herbicide-resistant crops - a weed scientists perspective. *Phytoprotection*. 75(Suppl S), 71-77 (1994)
- Ellstrand NC, Prentice HC, Hancock JF. Gene flow and introgression from domesticated plants into their wild relatives [Review]. *Annual Review of Ecology & Systematics* 30, 539-563 (1999)
- Ellstrand NC, Whitkus R, Rieseberg LH. Distribution of spontaneous plant hybrids. *PNAS* 93(10), 5090-5093 (1996)
- Ellstrand NC. When transgenes wander, should we worry? *Plant Physiology* 125(4), 1543-1545 (2001)
- Fredshavn JR, Poulsen GS. Growth behavior and competitive ability of transgenic crops. *Field Crops Research* 45(1-3), 11-18 (1996)
- Gressel J, Kleifeld Y. Can wild species become problem weeds because of herbicide resistance - *Brachypodium distachyon* - a case study. *Crop Protection* 13(8), 563-566 (1994)
- Hokanson SC, Hancock JF, Grumet R. Direct comparison of pollen-mediated movement of native and engineered genes. *Euphytica*. 96(3), 397 ff. (1997)
- Klinger T, Ellstrand NC. Transgene movement via gene flow: recommendations for improved biosafety assessment. In: *Methods for risk assessment of transgenic plants, Vol iii : ecological risks and prospects of transgenic plants, where do we go from here? A dialogue between biotech industry and science* (Eds Ammann K, Jacot Y, Kjellsson G, Simonsen V), 129-140 (1999)
- Metz PLJ, Stiekema WJ, Nap JP. A transgene-centered approach to the biosafety of transgenic phosphinothricin-tolerant plants. *Molecular Breeding* 4(4), 335-341 (1998)
- Norris CE, Simpson EC, Sweet JB, Thomas JE. Monitoring weediness and persistence of genetically modified oilseed rape (*Brassica napus*) in the UK. *Gene flow and agriculture: relevance for transgenic crops* (72) 255-260 (1999)

- Paterson AH, Schertz KF, Lin YR, Liu SC, Chang YL. The weediness of wild plants - molecular analysis of genes influencing dispersal and persistence of johnsongrass, *Sorghum halepense* (L) pers. PNAS 92(13), 6127-6131 (1995)
- Purrington CB, Bergelson J. Assessing weediness of transgenic crops - industry plays plant ecologist. Trends in Ecology & Evolution 10(8), 340-342 (1995)
- Quist D, Chapela IH. Transgenic DNA introgressed into traditional maize landraces in Oaxaca, Mexico. Nature. 414(6863), 541-543 (2001)
- Teycheney PY, Tepfer M. Gene flow from virus-resistant transgenic crops to wild relatives or to infecting viruses. Gene flow and agriculture: relevance for transgenic crops (72) 191-196 (1999)

### **Auswirkungen auf *non-target-Organismen***

- Acciarri N, Vitelli G, Arpaia S, Mennella G, Sunseri F, Rotino GL. Transgenic resistance to the Colorado potato beetle in Bt-expressing eggplant fields. Hortscience. 35(4), 722-725 (2000)
- Altieri MA. The ecological impacts of transgenic crops on agroecosystem health. Ecosystem Health. 6(1), 13-23 (2000)
- Bauer LS. Resistance - a threat to the insecticidal crystal proteins of *Bacillus thuringiensis*. Florida Entomologist. 78(3), 414-443 (1995)
- Bernal JS, Griset JG, Gillogly PO. Impacts of developing on Bt maize-intoxicated hosts on fitness parameters of a stem borer parasitoid. Journal of Entomological Science. 37(1), 27-40 (2002)
- Betz FS, Hammond BG, Fuchs RL. Safety and advantages of *Bacillus thuringiensis*-protected plants to control insect pests. Regulatory Toxicology & Pharmacology. 32(2), 156-173 (2000)
- Brunelle F, Nguyen-Quoc B, Cloutier C, Michaud D. Protein hydrolysis by Colorado potato beetle, *Leptinotarsa decemlineata*, digestive proteases, The catalytic role of cathepsin D. Archives of Insect Biochemistry & Physiology. 42(1), 88-98 (1999)
- Couty A, de la Vina G, Clark SJ, Kaiser L, Pham-Delegue MH, Poppy GM. Direct and indirect sublethal effects of *Galanthus nivalis* agglutinin (GNA) on the development of a potato-aphid parasitoid, *Aphelinus abdominalis* (Hymenoptera, Aphelinidae). Journal of Insect Physiology. 47(6), 553-561 (2001)
- Coviella CE, Stipanovic RD, Trumble JT. Plant allocation to defensive compounds, interactions between elevated CO<sub>2</sub> and nitrogen in transgenic cotton plants. Journal of Experimental Botany. 53(367), 323-331 (2002)
- Crecchio C, Stotzky G. Biodegradation and insecticidal activity of the toxin from *Bacillus thuringiensis* subsp *kurstaki* bound on complexes of montmorillonite-humic acids-Al hydroxypolymers. Soil Biology & Biochemistry. 33(4-5), 573-581 (2001)

- Crecchio C, Stotzky G. Insecticidal activity and biodegradation of the toxin from *Bacillus thuringiensis* subsp. *kurstaki* bound to humic acids from soil. *Soil Biology & Biochemistry*. 30(4), 463-470 (1998)
- Fitt GP, Mares CL, Llewellyn DJ. Field evaluation and potential ecological impact of transgenic cottons (*Gossypium hirsutum*) in Australia. *Biocontrol Science & Technology*. 4(4), 535-548 (1994)
- Giddings G. Tansley review no. 99 - The release of genetically engineered micro-organisms and viruses into the environment [Review]. *New Phytologist*. 140(2), 173-184 (1998)
- Glandorf DCM, Bakker PAHM, Vanloon LC. Influence of the production of antibacterial and antifungal proteins by transgenic plants on the saprophytic soil microflora [Review]. *Acta Botanica Neerlandica*. 46(1), 85-104 (1997)
- Graham J, Gordon SC, Smith K, McNicol RJ, McNicol JW. The effect of the Cowpea trypsin inhibitor in strawberry on damage by vine weevil under field conditions. *The Journal of Horticultural Science & Biotechnology*. 77(1), 33-40 (2002)
- Griffiths BS, Geoghegan IE, Robertson WM. Testing genetically engineered potato, producing the lectins GNA and Con A, on non-target soil organisms and processes. *Journal of Applied Ecology*. 37(1), 159-170 (2000)
- Hilbeck A, Baumgartner M, Fried PM, Bigler F. Effects of transgenic *Bacillus thuringiensis* corn-fed prey on mortality and development time of immature *Chrysoperla carnea* (Neuroptera, Chrysopidae). *Environmental Entomology*. 27(2), 480-487 (1998)
- Hoy MA. The David Rosen Lecture, biological control in citrus. *Crop Protection*. 19(8-10), 657-664 (2000)
- James RR, Croft BA, Strauss SH. Susceptibility of the cottonwood leaf beetle (Coleoptera, Chrysomelidae) to different strains and transgenic toxins of *Bacillus thuringiensis*. *Environmental Entomology*. 28(1), 108-115 (1999)
- Obrycki JJ, Losey JE, Taylor OR, Jesse LCH. Transgenic insecticidal corn, Beyond insecticidal toxicity to ecological complexity. *Bioscience*. 51(5), 353-361 (2001)
- Paoletti MG, Pimentel D. The environmental and economic costs of herbicide resistance and host-plant resistance to plant pathogens and insects [Review]. *Technological Forecasting & Social Change*. 50(1), 9-23 (1995)
- Pascher K, Gollmann G. Ecological risk assessment of transgenic plant releases, an Austrian perspective. *Biodiversity & Conservation*. 8(8), 1139-1158 (1999)
- Pilcher CD, Obrycki JJ, Rice ME, Lewis LC. Preimaginal development, survival, and field abundance of insect predators on transgenic *Bacillus thuringiensis* corn. *Environmental Entomology*. 26(2), 446-454 (1997)
- Raps A, Kehr J, Gugerli P, Moar WJ, Bigler F, Hilbeck A. Immunological analysis of phloem sap of *Bacillus thuringiensis* corn and of the nontarget herbivore *Rhopalosiphum padi* (Homoptera, Aphididae) for the presence of Cry1Ab. *Molecular Ecology*. 10(2), 525-533 (2001)

- Reed GL, Jensen AS, Riebe J, Head G, Duan JJ. Transgenic Bt potato and conventional insecticides for Colorado potato beetle management, comparative efficacy and non-target impacts. *Entomologia Experimentalis et Applicata*. 100(1), 89-100 (2001)
- Riddick EW, Dively G, Barbosa P. Season-long abundance of generalist predators in transgenic versus nontransgenic potato fields. *Journal of Entomological Science*. 35(4), 349-359 (2000)
- Saxena D, Stotzky G. Insecticidal toxin from *Bacillus thuringiensis* is released from roots of transgenic Bt corn in vitro and in situ. *FEMS Microbiology Ecology*. 33(1), 35-39 (2000)
- Schuler TH, Denholm I, Jouanin L, Clark SJ, Clark AJ, Poppy GM. Population-scale laboratory studies of the effect of transgenic plants on nontarget insects. *Molecular Ecology*. 10(7), 1845-1853 (2001)
- Sharma HC, Ortiz R. Transgenics, pest management, and the environment [Review]. *Current Science*. 79(4), 421-437 (2000)
- Shelton AM, Zhao JZ, Roush RT. Economic, ecological, food safety, and social consequences of the deployment of Bt transgenic plants [Review]. *Annual Review of Entomology*. 47, 845-881 (2002)
- Sims SR. *Bacillus thuringiensis* var *kurstaki* [cryIIa(c)] protein expressed in transgenic cotton - effects on beneficial and other non-target insects. *Southwestern Entomologist*. 20(4), 493-500 (1995)
- Sims SR. Host activity spectrum of the cry-IIa *Bacillus thuringiensis* subsp. *Kurstaki* protein - effects on Lepidoptera, Diptera, and non-target arthropods. *Southwestern Entomologist*. 22(4), 395-404 (1997)
- Stewart CN, Richards HA, Halfhill MD. Transgenic plants and biosafety, Science, misconceptions and public perceptions. *Biotechniques*. 29(4), 832-+ (2000)
- Stotzky G. Persistence and biological activity in soil of insecticidal proteins from *Bacillus thuringiensis* and of bacterial DNA bound on clays and humic acids. *Journal of Environmental Quality*. 29(3), 691-705 (2000)
- Tschenn J, Losey JE, Jesse LH, Obrycki JJ, Hufbauer R. Effects of corn plants and corn pollen on monarch butterfly (*Lepidoptera*, *Danaiidae*) oviposition behavior. *Environmental Entomology*. 30(3), 495-500 (2001)
- Wright CL, Zangerl AR, Carroll MJ, Berenbaum MR. Absence of toxicity of *Bacillus thuringiensis* pollen to black swallowtails under field conditions. *Proceedings of the National Academy of Sciences of the United States of America*. 97(14), 7700-7703 (2000)
- Yu L, Berry RE, Croft BA. Effects of *Bacillus thuringiensis* toxins in transgenic cotton and potato on *Folsomia candida* (Collembola, Isotomidae) and *Oppia nitens* (Acari, Oribatidae). *Journal of Economic Entomology*. 90(1), 113-118 (1997)
- Zangerl AR, McKenna D, Wright CL, Carroll M, Ficarello P, Warner R, Berenbaum MR. Effects of exposure to event 176 *Bacillus thuringiensis* corn pollen on monarch and black swallowtail caterpillars under field conditions. *Proceedings*

of the National Academy of Sciences of the United States of America. 98(21), 11908-11912 (2001)

Zwahlen C, Nentwig W, Bigler F, Hilbeck A. Tritrophic interactions of transgenic *Bacillus thuringiensis* corn, *Anaphothrips obscurus* (Thysanoptera, Thripidae), and the predator *Orius majusculus* (Heteroptera, Anthocoridae). *Environmental Entomology*. 29(4), 846-850 (2000)

## **2.2 GESUNDHEIT**

### **„Unintended Effects“**

Boenke A. Contribution of European research to risk analysis. *Food Additives & Contaminants* 18(12), 1135-1140 (2001)

Flachowsky G, Aulrich K. Nutritional assessment of feeds from genetically modified organism. *Journal of Animal & Feed Sciences* 10(Suppl 1), 181-194 (2001)

Frenzel T, Miller A, Engel KH. Metabolite profiling - A Fractionation method for analysis of major and minor compounds in rice grains. *Cereal Chemistry* 79(2), 215-221 (2002)

Kuiper HA, Kleter GA, Noteborn HPJM, Kok EJ. Assessment of the food safety issues related to genetically modified foods [Review]. *Plant Journal* 27(6), 503-528 (2001)

Kuiper HA, Noteborn HPJM, Kok EJ, Kleter GA. Safety aspects of novel foods. *Food Research International* 35(2-3), 267-271 (2002)

Noteborn HPJM, Lommen A, van der Jagt RC, Weseman JM. Chemical fingerprinting for the evaluation of unintended secondary metabolic changes in transgenic food crops. *Journal of Biotechnology* 77(1), 103-114 (2000)

Rowland IR. Genetically modified foods, science, consumers and the media. *Proceedings of the Nutrition Society* 61(1), 25-29 (2002)

Stewart CN, Richards HA, Halfhill MD. Transgenic plants and biosafety, Science, misconceptions and public perceptions. *Biotechniques* 29(4), 832-+ (2000)

Wal JM. Biotechnology and allergic risk. *Revue Francaise d'Allergologie et d'Immunologie Clinique* 41(1), 36-41 (2001)

### **Fütterungsstudien**

Aulrich K, Bohme H, Daenicke R, Halle I, Flachowsky G. Genetically modified feeds in animal nutrition 1st communication (*Bacillus thuringiensis* (Bt) corn in poultry (pig and ruminant nutrition. *Archives of Animal Nutrition-Archiv für Tierernahrung* 54(3), 183-195 (2001)

Aulrich K, Bohme H, Daenicke R, Halle I, Flachowsky G. Novel feeds - a review of experiments at our Institute. *Food Research International* 35(2-3), 285-293 (2002)

- Barriere Y, Verite R, Brunschwig P, Surault F, Emile JC. Feeding value of corn silage estimated with sheep and dairy cows is not altered by genetic incorporation of Bt176 resistance to *Ostrinia nubilalis*. *Journal of Dairy Science* 84(8), 1863-1871 (2001 Aug)
- Bohme H, Aulrich K, Daenicke R, Flachowsky G. Genetically modified feeds in animal nutrition 2nd communication (Glufosinate tolerant sugar beets (roots and silage) and maize grains for ruminants and pigs. *Archives of Animal Nutrition-Archiv fur Tierernahrung* 54(3), 197-207 (2001)
- Brake J, Vlachos D. Evaluation of transgenic event 176 bt corn in broiler chickens. *Poultry Science* 77(5), 648-653 (1998)
- Cromwell GL, Lindemann MD, Randolph JH, Parker GR, Coffey RD, Laurent KM, Armstrong CL, Mikel WB, Stanisiewski EP, Hartnell GF. Soybean meal from Roundup Ready or conventional soybeans in diets for growing-finishing swine. *Journal of Animal Science* 80(3), 708-715 (2002)
- Einspanier R, Klotz A, Kraft J, Aulrich K, Poser R, Schwagele F, Jahreis G, Flachowsky G. The fate of forage plant DNA in farm animals (a collaborative case-study investigating cattle and chicken fed recombinant plant material. *European Food Research & Technology* 212(2), 129-134 (2001)
- Flachowsky G, Aulrich K. Animal nutrition and genetic modified organism (GMO) [German]. *Landbauforschung Volkenrode* 49(1), 13-20 (1999)
- Hammond BG, Vicini JL, Hartnell GF, Naylor MW, Knight CD, Robinson EH, Fuchs RL, Padgett SR. The feeding value of soybeans fed to rats (chickens (catfish and dairy cattle is not altered by genetic incorporation of glyphosate tolerance. *Journal of Nutrition* 126(3), 717-727 (1996)
- Ludden PA, Cecava MJ, Hendrix KS. The value of soybean hulls as a replacement for corn in beef cattle diets formulated with or without added fat. *Journal of Animal Science* 73(9), 2706-2711 (1995)
- Maertens L, Luzi F, Degroote G. Effect of dietary protein and amino acids on the performance (carcass composition and n-excretion of growing rabbits. *Annales de Zootechnie* 46(3), 255-268 (1997)
- Masoero F, Moschini M, Rossi F, Prandini A, Pietri A. Nutritive value (mycotoxin contamination and in vitro rumen fermentation of normal and genetically modified corn (cry1A(b)) grown in northern Italy. *Maydica* 44(3), 205-209 (1999)
- Rothenberg G, Beadnall RMH, McGrady JE, Clark JH. Competing bromination and oxidation pathways in acid bromate solutions (an experimental and theoretical study. *Journal of the Chemical Society-Perkin Transactions II* (3), 630-635 (2002)
- Sidhu RS, Hammond BG, Fuchs RL, Mutz JN, Holden LR, George B, Olson T. Glyphosate-tolerant corn (The composition and feeding value of grain from glyphosate-tolerant corn is equivalent to that of conventional corn (*Zea mays* L.). *Journal of Agricultural & Food Chemistry* 48(6), 2305-2312 (2000)