

Ever New Topics Damage the Reputation – The Public and the Publicized Issues of the Seed Industry

Online Appendix

Abstract

The interplay of media, NGOs and public opinion has generated consumer interest for the seed industry. The seed industry's reputation has been under pressure, due to disputes on intellectual property rights (IPR), genetically modified organisms (GM), market concentration (MC), privatization concern (PC), biodiversity concerns (BC) and the bee colony collapse disorder (BCCD). Public opinion has also managed to influence regulatory frameworks with respect to these topics of concern (ToC). Against this background, public interest in ToC, their attitude towards ToC and the seed sector's reputation was evaluated, among a sample of 753 consumers. The average interest in the ToC is moderate, except for a high public interest in BCCD. The results of partial least square models indicate the correlation of ToC with reputation. The attitude towards MC and IP stand out as strongly linked to reputation. While IP is known to managers, seed firms should improve the communication of mergers, highlighting potential social benefits.

Key words: corporate social responsibility (CSR), genetically modified crops, reputation, partial least square (PLS), seed industry

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Appendix 1: The dimensions of reputation

Reputation dimension	Ø	Std
Financing	2,66	0,84
Quality of products	2,76	0,93
Employer	2,93	0,85
Trust	2,99	1,01
Sustainability	3,07	1,01
Credibility	3,08	0,97
Image of industry leaders	3,08	0,98
Environmental awareness	3,12	1,06
Social commitment	3,13	0,91
Media image	3,18	0,91
Free of scandals	3,21	0,99
Risk of products	3,21	0,96

Note. Grading 1=very good reputation, 2=good reputation, 3=medium reputation 4=bad reputation, 5= very bad reputation

Appendix 2: The probability that the effect size on reputation differs between two topics of concern

ToC on reputation	BCCD	GM	IP	IPR	MC	PC	BC
BCCD	X	0,999	0,086	0,869	0,000	0,995	1,000
GM		X	0,003	0,054	0,000	0,454	0,902
IP			X	0,991	0,042	0,996	0,997
IPR				X	0,000	0,918	0,999
MC					X	1,000	1,000
PC						X	0,911
BC							X

Note. BC = biodiversity concern; IPR = intellectual property rights; GM = genetical engineering; IP = innovation and productivity; MC = market concentration; PC = privatization concern, BCCD = bee colony collapse disorder, The p-values of the test statistic are displayed in a way, so that a value over 0.95 indicates the ToC in the row is significantly higher than the ToC in the column and a value under 0.05 indicates a vice versa significant difference

Appendix 3: Statements and media sources

Abbrev.	Translated statement	Operationalized statement (in German language)	Content abstracted from
MC 1	The merger of Bayer and Monsanto is like a wedding in hell.	Die Fusion von Bayer und Monsanto ist wie eine Hochzeit in der Hölle.	Der Tagesspiegel, 16.09.16
MC 2	Mergers in the seed industry mean the end of rural farming.	Fusionen in der Saatgutbranche bedeuten das Aus für die bäuerliche Landwirtschaft.	Kölner Express, 12.10.16
MC 3	Politics have to tell the cartel office to forbid the Monsanto merger.	Die Politik muss dafür sorgen, dass das Kartellamt Fusionen verbietet.	Nordwest-Zeitung, 16.09.16
MC 4	The Monsanto merger will lead to less hunger in the world. (reversed)	Durch Fusionen wird sich der Hunger in der Welt verringern. (invers)	Hamburger Morgenpost, 15.09.16
GM 1	The usage of genetic engineering has to be forbidden by politics.	Der Einsatz von Gentechnik muss von der Politik verboten werden.	Allgemeine Zeitung, 17.06.16
GM 2	Genetic engineering speeds up plant breeding.	Gentechnik beschleunigt die Pflanzenzüchtung.	Tagesspiegel, 16.09.16
GM 3	Genetic engineering is the work of the devil. (reversed)	Gentechnik ist ein Teufelswerk. (invers)	Tagesspiegel, 16.09.16
EC 1	We need a system change – away from monoculture.	Wir brauchen einen Systemwechsel – weg von der Monokultur.	Lebensmittelzeitung, 16.09.16
EC 2	Seed breeding companies are responsible for the preservation of biodiversity (reversed)	Saatgutunternehmen tragen eine Verantwortung für den Erhalt der Artenvielfalt. (invers)	Ernährungsdienst, 23.09.16 Zeit, 19.01.17
EC 3	Big companies stand for diversity rather than monoculture.	Großkonzerne stehen für Vielfalt statt Monokultur. (invers)	Welt online, 15.10.16
BCCD 1	Seed breeding companies are not to blame concerning the death of bees. (reversed)	Saatgutunternehmen haben keine Mitschuld am Bienensterben. (invers)	Rheinische Post Düsseldorf, 15.09.16 Lebensmittelzeitung, 16.09.16
BCCD 2	Bees are better off in the city, because they don't find any chemically treated seeds.	Bienen geht es in der Stadt besser, weil sie kein chemisch behandeltes Saatgut vorfinden.	Lebensmittelzeitung 16.09.16
IPR 1	There should be patents on seeds. (reversed)	Es soll Patente auf Saatgut geben.	Südwest Presse, 20.09.16
IPR 2	Patents give the companies a lot of power over nature and humans.	Patente geben Unternehmen viel Macht über Natur und Mensch.	Stern, 02.06.16
IPR 3	With patents, companies ensure control over the world's food supplies.	Mit Patenten sichern sich Unternehmen die Kontrolle über die Welternährung.	TAZ, 08.12.16
PC 1	Politics should not leave the seed research to private businesses.	Die Politik darf die Saatgut-Forschung nicht der Privatwirtschaft überlassen.	Hamburger Abendblatt Online, 21.10.16

PC 2	The state should not leave the seed research to private businesses.	Die Lebensmittelversorgung sollte nicht in privater Hand liegen.	dpa-AFX ProFeed, 04.12.2016
IP 1	Innovations in plant breeding help the plants to become more resistant.	Innovationen in der Saatgutzucht machen die Pflanzen widerstandsfähiger.	Nordwest-Zeitung, 01.02.17
IP 2	Newly bred seeds produce food with better processing qualities.	Neu gezüchtetes Saatgut hat bessere Verarbeitungsqualitäten.	Ernährungs-dienst, 03.02.17
IP 3	Varieties with high yields are necessary in order to feed humans in the future.	Sorten mit hohem Ernteertrag sind notwendig, um zukünftig mehr Menschen zu ernähren.	TAZ, 29.11.16