

Assumptions

Assumed reduction in yeild of oilseed rape from banning ninos

Yield reduction	year 1	year 10
		5% 26%

Sales (£m)

Year	Oilseed rape	Linseed	Maize
2009	476	17	179
2010	674	23	197
2011	1111	27	164
Average	754	22	180

Note: sales include changes in stock
Source: Agriculture in the UK 2011

Assumed reduction in proportion of maize if ninos are banned 7.30%

Assumed reduction in production of linseed if ninos are banned 100%

Assumed impact of banning ninos on bees pollination services

Option 1	Banning ninos has no impact on bee populations We assume that the increase in ecosystem services from bees when ninos are banned equals the planted area of oilseed rape as a proportion of pollinator-dependent crops.
Option 2	

Annual value of pollination of oilseed rape in 2009 (£m) 117

Source: <http://www.foe.co.uk/resource/briefings/beesreport.pdf>
Low annual value of pollination of OSR as per in house previous calculations

Assumed annual increase in bee population 2.50%

Assumed discount factor 3.50%

Calculations costs

Assumed revenue from oilseed rape under scenarios 1 and 2 (£m)

Year	1	2	3	4	5	6	7	8	9	10
Baseline (no ban of ninos)	754	754	754	754	754	754	754	754	754	754
Option 1 banning with no benefits to bee pollinators	716	698	681	663	646	628	611	593	575	558
Option 2 banning with benefits to bee pollinators	716	698	681	663	646	628	611	593	575	558
Option 3 banning with low benefits to bee pollinators	716	698	681	663	646	628	611	593	575	558

Assumed reduction in revenue of oilseed rape (£m)

Year	1	2	3	4	5	6	7	8	9	10
Option 1	38	55	73	90	108	125	143	161	179	196
Option 2	38	55	73	90	108	125	143	161	179	196
Option 3 banning with low benefits to bee pollinators	38	55	73	90	108	125	143	161	179	196

Assumed reduction in reveue of maize and linseed

Year	1	2	3	4	5	6	7	8	9	10
Maize	13	13	13	13	13	13	13	13	13	13
Linseed	22	22	22	22	22	22	22	22	22	22

Total cost (£m)

Year	1	2	3	4	5	6	7	8	9	10
Option 1	-73	-91	-108	-126	-143	-161	-178	-196	-214	-231
Option 2	-73	-91	-108	-126	-143	-161	-178	-196	-214	-231
Option 3	-73	-91	-108	-126	-143	-161	-178	-196	-214	-231

Total benefit (£m)

Year	1	2	3	4	5	6	7	8	9	10
Option 1	0	0	0	0	0	0	0	0	0	0
Option 2	117	120	123	126	129	132	136	139	143	146
Option 3	55	56	58	59	61	62	64	65	67	69

Net costs and benefit (£m)

Year	1	2	3	4	5	6	7	8	9	10
Option 1	-73	-91	-108	-126	-143	-161	-178	-196	-214	-231
Option 2	44	29	15	0	-14	-29	-43	-57	-72	-85
Option 3	-18	-34	-50	-67	-83	-99	-115	-131	-147	-162

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Discounted costs and benefit (£m)

Year	1	2	3	4	5	6	7	8	9	10
Discount factor	1	1.035	1.071	1.109	1.148	1.188	1.229	1.272	1.317	1.363
Option 1	-73	-88	-101	-113	-125	-135	-145	-154	-163	-170
Option 2	44	28	14	0	-12	-24	-35	-45	-54	-62
Option 3	-18	-33	-47	-60	-72	-83	-93	-103	-112	-119

NPV (£m)

Option 1	-£1,267
Option 2	-£147
Option 3	-£741

