**SUPPORTING INFORMATION I.**

Dose response curves and estimated parameter values.

Severity data from the trial sites in each year were scaled such that the severity at dose zero,

*S*0, equals 1 and then averaged across experimental sites. For each year-fungicide combination

dose response curves, the relative severity, *Srel*, as function of fungicide application dose, were

fitted, using non-linear least squares, with the equation

$S\_{rel}(D)=\left(1-RD+RD e^{-k D}\right)$

where *S*rel is disease severity, RD is the maximum reduction in the relative severity (at a theoretical infinite dose), *k* is the curvature parameter and *D* the fungicide dose.

*azoxystrobin (as commercial product ‘Amistar’, Syngenta)*



|  |  |  |  |
| --- | --- | --- | --- |
| year | k | RD | R2 |
| 1997 | 4.68±0.91 | 0.602±0.029 | 0.97 |
| 1998 | 8.45±3.66 | 0.628±0.033 | 0.96 |
| 2001 | 4.70±0.82 | 0.583±0.024 | 0.99 |
| 2002 | 2.62±0.56 | 0.775±0.054 | 0.97 |
| 2003 | 4.69±1.01 | 0.324±0.017 | 0.98 |
| 2004 | 2.47±1.47 | 0.193±0.039 | 0.85 |
| 2005 | 1.75±2.08 | 0.312±0.145 | 0.627 |
| 2006 | 0.36±17.11 | 0.177±6.319 | 0.02 |

*prothioconazole (as commercial product ‘Proline’, Bayer)*





|  |  |  |  |
| --- | --- | --- | --- |
| year | RD | k | R2  |
| 2001 | 0.760±0.033 | 2.32±0.29 | 0.99 |
| 2002 | 0.891±0.015 | 10.29±1.71 | 0.99 |
| 2003 | 0.816±0.028 | 3.08±0.34 | 0.99 |
| 2004 | 0.757±0.007 | 3.49±0.12 | 0.99 |
| 2005 | 0.839±0.042 | 3.02±0.49 | 0.99 |
| 2006 | 0.813±0.030 | 4.22±0.62 | 0.99 |
| 2007 | 0.900±0.024 | 2.70±0.23 | 0.99 |
| 2008 | 0.763±0.037 | 1.54±0.18 | 0.99 |
| 2009 | 0.683±0.027 | 2.01±0.21 | 0.99 |
| 2010 | 0.494±0.023 | 12.36±0.94 | 0.97 |
| 2011 | 0.690±0.127 | 1.14±0.44 | 0.95 |
| 2012 | 0.512±0.032 | 1.92±0.31 | 0.98 |
| 2013 | 0.948±0.087 | 0.87±0.15 | 0.99 |
| 2014 | 0.617±0.034 | 2.51±0.41 | 0.98 |
| 2015 | 0.684±0.165 | 0.91±0.42 | 0.94 |
| 2016 | 0.689±0.073 | 1.19±0.28 | 0.98 |
| 2017 | 0.910±0.325 | 0.54±0.29 | 0.97 |
| 2018 | 0.477±0.094 | 1.48±0.69 | 0.89 |

*fluxapyroxad (as commercial product ‘Imtrex’, BASF)*



|  |  |  |  |
| --- | --- | --- | --- |
| year | k | RD | R2 |
| 2012 | 3.38±0.43 | 0.707±0.262 | 0.99 |
| 2013 | 4.27±1.36 | 0.874±0.070 | 0.95 |
| 2014 | 4.90±0.67 | 0.705±0.021 | 0.99 |
| 2015 | 4.99±0.63 | 0.799±0.039 | 0.99 |
| 2016 | 3.91±0.27 | 0.704±0.013 | 0.99 |
| 2017 | 2.62±0.76 | 0.666±0.063 | 0.95 |
| 2018 | 2.87±0.25 | 0.585±0.016 | 0.99 |