APPENDIX 3

Powdery mildew parameter estimates - fungicide dose-response curves

Powdery mildew

Experiment	Leaf	Date	Product	a	b	k	a+b	a+be**k
2	4	157	Patrol	0.6	4.4	-5.1	5.0	0.7
			Unix	1.0	4.0	-3.8	5.0	1.1
			Amistar+Corbel	0.6	4.4	-5.4	5.0	0.6
3	4	167	Opus	3.4	4.0	-2.7	7.4	3.6
			Patrol	0.8	6.6	-0.8	7.4	3.8
			Sanction	3.0	4.4	-1.1	7.4	4.5
8	3	155	Alto	-24.9	32.0	-0.2	7.1	2.6
			Patrol	0.8	6.3	-2.4	7.1	1.5
			Opus team	1.9	5.2	-1.8	7.1	2.8
			Amistar+Corbel	1.8	5.3	-1.1	7.1	3.6

Green leaf area

Experiment	Leaf	Date	Product	a	b	k	a+b	a+be**k
2	4	157	Amistar+Corbel	90.2	-22.3	-1.8	67.9	86.7
3	4	167	Alto	64.1	-58.1	-1.0	6.0	42.9
			Opus	64.6	-58.6	-2.3	6.0	58.9
			Sanction	28.3	-22.3	-2.8	6.0	27.0

Grain yield

Experiment	Product	a	b	k	a+b	a+be**k
2	Alto	8.7	-2.0	-4.8	6.7	8.7
	Opus	9.8	-3.1	-3.4	6.7	9.7
	Patrol	7.8	-1.1	-1.7	6.7	7.6
	Ensign	9.5	-2.8	-4.0	6.7	9.4
	Amistar+Corbel	10.2	-3.5	-1.8	6.7	9.6
3	Alto	8.6	-1.9	-2.8	6.7	8.5
	Corbel	7.9	-1.2	-0.7	6.7	7.3
	Folicur	8.5	-1.8	-3.3	6.7	8.4
	Patrol	12.2	-5.5	-0.1	6.7	7.1
	Sanction	9.0	-2.3	-0.9	6.7	8.0
	Tilt	8.4	-1.7	-1.5	6.7	8.0
	Amistar	9.5	-2.8	-1.5	6.7	8.8
8	Alto	5.1	-2.5	-3.7	2.6	5.1
	Opus	5.4	-2.8	-4.1	2.6	5.4
	Patrol	4.6	-2.0	-2.2	2.6	4.4
	Ensign	6.0	-3.4	-1.4	2.6	5.2
	Opus team	6.1	-3.5	-2.7	2.6	5.9
	Amistar+Corbel	5.8	-3.2	-1.9	2.6	5.3
	Neon	4.2	-1.6	-2.8	2.6	4.1

Specific weight

Experiment	Product	a	b	k	a+b	a+be**k
2	Amistar+Corbel	71.5	-5.0	-1.5	66.5	70.4
3	Alto	75.0	-4.8	-2.9	70.2	74.7
	Opus	75.8	-5.6	-4.4	70.2	75.7
	Sanction	76.5	-6.3	-0.9	70.2	73.8
	Tilt	79.6	-9.4	-0.5	70.2	73.7
	Amistar	76.8	-6.6	-1.4	70.2	75.2
8	Opus	71.9	-8.2	-4.2	63.7	71.8
	Patrol	69.5	-5.8	-2.3	63.7	69.0
	Ensign	558.5	-494.8	0.0	63.7	71.6
	Opus team	74.1	-10.4	-2.8	63.7	73.5
	Amistar+Corbel	72.5	-8.8	-1.8	63.7	71.2
	Neon	69.2	-5.5	-1.7	63.7	68.2

S. nodorum parameter estimates - fungicide dose-response curves

Foliar *S. nodorum*

Experiment	Leaf	Date	Product	a	b	k	a+b	a+be**k
6	1	168	Opus	0.3	5.4	-5.2	5.7	0.4
			Unix	0.1	5.6	-7.3	5.7	0.1
			Amistar	1.0	4.8	-4.5	5.7	1.0
			Caramba	-0.1	5.8	-3.5	5.7	0.1
	2	168	Opus	-9.3	38.0	-1.4	28.7	0.2
			Bravo	-5.6	34.3	-0.9	28.7	8.4
			Caramba	1.4	27.3	-3.7	28.7	2.1
			Landmark	-0.6	29.3	-2.3	28.7	2.4

Green leaf area

Experiment	Leaf	Date	Product	a	b	k	a+b	a+be**k
6	1	168	Opus	97.7	-7.8	-5.3	89.9	95.6
			Sanction	96.2	-6.3	-2.3	89.9	95.6
			Amistar	96.6	-6.7	-3.0	89.9	96.3
			Caramba	97.7	-7.8	-3.7	89.9	97.5
			Landmark	97.2	-7.4	-5.3	89.9	97.2
	1	168	Opus	96.4	-55.9	-3.1	40.5	93.9
			Bravo	94.0	-53.6	-1.8	40.5	85.3
			Unix	78.7	-38.2	-6.2	40.5	78.6
			Amistar	83.5	-43.0	-2.4	40.5	79.6
			Ensign	74.6	-34.1	-3.3	40.5	73.3
			Caramba	95.2	-54.7	-3.2	40.5	92.9
			Landmark	91.3	-50.8	-4.7	40.5	90.8

S. nodorum - glume blotch on the ear

Experiment	Product	a	b	k	a+b	a+be**k
5	Opus	6.9	23.0	-6.1	29.9	7.0
	Pointer	8.0	21.9	-5.2	29.9	8.1
	Unix	7.9	22.0	-2.9	29.9	9.2
	Sportak	11.5	18.4	-4.8	29.9	11.7
7	Opus	3.4	10.9	-3.5	14.2	3.7
	Folicur	5.0	9.2	-1.6	14.2	7.0
	Sanction	0.3	13.9	-0.9	14.2	6.0

Grain yield

Experiment	Product	a	b	k	a+b	a+be**k
5	Alto	5.9	-0.9	-2.8	5.0	5.9
	Opus	7.6	-2.6	-2.4	5.0	7.4
	Pointer	6.4	-1.3	-3.3	5.0	6.3
	Sanction	7.4	-2.4	-0.6	5.0	6.1
6	Opus	5.1	-2.9	-2.6	2.2	4.8
	Bravo	3.6	-1.5	-2.2	2.2	3.4
	Folicur	4.9	-2.8	-2.0	2.2	4.6
	Unix	3.7	-1.5	-5.0	2.2	3.7
	Amistar	4.9	-2.7	-2.1	2.2	4.5
	Ensign	3.7	-1.5	-1.4	2.2	3.3
	Caramba	5.2	-3.1	-2.1	2.2	4.8
	Landmark	5.4	-3.3	-2.2	2.2	5.0
7	Opus	6.4	-2.8	-2.2	3.6	6.1
	Bravo	6.2	-2.6	-1.0	3.6	5.2
	Folicur	5.7	-2.1	-1.9	3.6	5.3
	Sanction	5.1	-1.5	-1.5	3.6	4.8
	Unix	4.8	-1.2	-1.6	3.6	4.5
	Amistar	6.4	-2.8	-1.8	3.6	5.9
	Ensign	5.6	-2.1	-1.6	3.6	5.2
	Caramba	5.9	-2.3	-1.9	3.6	5.5
	Landmark	6.9	-3.3	-1.9	3.6	6.4

Specific weight

Experiment	Product	a	b	k	a+b	a+be**k
5	Bravo	154.1	-87.9	-0.1	66.2	70.1
	Folicur	70.9	-4.8	-2.0	66.2	70.3
6	Opus	67.5	-10.4	-2.2	57.1	66.3
	Bravo	63.6	-6.5	-1.5	57.1	62.2
	Folicur	64.3	-7.2	-3.7	57.1	64.1
	Unix	62.2	-5.1	-5.9	57.1	62.2
	Amistar	64.9	-7.8	-2.6	57.1	64.3

	Ensign	60.4	-3.3	-2.1	57.1	60.0
	Caramba	67.1	-10.0	-2.2	57.1	65.9
	Landmark	64.9	-7.8	-4.1	57.1	64.8
7	Opus	64.4	-11.9	-2.3	52.4	63.2
	Bravo	65.4	-12.9	-0.7	52.4	58.7
	Folicur	60.5	-8.1	-1.8	52.4	59.2
	Sanction	59.5	-7.1	-1.1	52.4	57.1
	Unix	56.8	-4.4	-6.9	52.4	56.8
	Amistar	62.7	-10.2	-2.6	52.4	61.9
	Ensign	60.6	-8.1	-1.6	52.4	59.0
	Caramba	62.7	-10.2	-1.5	52.4	60.3
	Landmark	65.1	-12.6	-2.3	52.4	63.8

S. tritici parameter estimates - fungicide dose-response curves

Septoria tritici

Experiment	Leaf	Date	Product	a	b	k	a+b	a+be**k
1	1	185	Opus	0.1	41.0	-16.4	41.1	0.1
			Folicur	-0.3	41.4	-4.3	41.1	0.2
			Amistar	3.0	38.1	-6.6	41.1	3.0
			Ensign	5.0	36.1	-3.8	41.1	5.8
			Landmark	0.0	41.1	-12.5	41.1	0.0
1	2	185	Opus	0.5	38.6	-6.4	39.1	0.6
			Folicur	2.8	36.2	-4.3	39.1	3.3
			Amistar	13.1	25.9	-7.3	39.1	13.1
			Ensign	13.9	25.2	-3.9	39.1	14.4
			Landmark	1.6	37.5	-13.5	39.1	1.6
1	3	185	Opus	2.9	15.0	-3.1	17.8	3.5
			Folicur	-7.9	25.8	-0.8	17.8	4.3
			Landmark	3.3	14.5	-5.8	17.8	3.3
1	4	185	Opus	13.3	26.8	-6.0	40.1	13.3
			Landmark	10.1	30.0	-5.6	40.1	10.2
3	1	188	Alto	14.0	43.2	-5.4	57.2	14.1
			Opus	7.3	49.8	-8.3	57.1	7.3
			Folicur	15.2	41.8	-4.7	57.1	15.6
			Sanction	14.1	43.0	-1.8	57.1	21.5
			Tilt	5.8	51.2	-1.6	57.1	16.1
			Amistar	-17.3	74.4	-1.0	57.1	9.9
3	2	167	Alto	1.5	8.6	-5.7	10.1	1.5
			Opus	1.2	8.9	-10.7	10.1	1.2
			Folicur	1.1	9.0	-5.2	10.1	1.1
			Patrol	5.4	4.7	-1.2	10.1	6.8
			Sanction	0.8	9.4	-2.8	10.1	1.3
			Tilt	1.1	9.0	-2.9	10.1	1.6
			Amistar	2.3	7.8	-4.0	10.1	2.5

3	2	188	Alto	10.9	58.3	-3.8	69.2	12.2
			Opus	3.8	65.5	-6.4	69.2	3.9
			Folicur	12.2	57.1	-2.8	69.2	15.8
			Sanction	-149.7	219.0	-0.2	69.2	23.2
			Tilt	5.3	63.9	-1.3	69.2	23.7
			Amistar	2.1	67.1	-1.5	69.2	17.0
3	3	167	Alto	7.6	23.0	-4.0	30.5	8.0
			Opus	4.3	26.2	-8.2	30.5	4.3
			Folicur	7.8	22.7	-4.8	30.5	8.0
			Sanction	4.6	25.9	-2.5	30.5	6.8
			Tilt	5.8	24.8	-1.9	30.5	9.5
			Amistar	12.4	18.1	-3.5	30.5	12.9
3	4	167	Alto	14.1	49.1	-1.3	63.2	27.0
			Folicur	32.0	31.3	-2.6	63.2	34.3
4	2	181	Alto	3.1	26.2	-4.4	29.3	3.4
			Opus	1.5	27.8	-7.0	29.3	1.6
			Corbel	7.0	22.3	-2.0	29.3	10.2
			Folicur	4.5	24.9	-10.4	29.3	4.5
			Caramba	3.1	26.3	-4.6	29.3	3.3
4	3	159	Opus	3.9	15.4	-6.3	19.3	3.9
			Corbel	5.1	14.2	-5.4	19.3	5.2
			Folicur	4.3	14.9	-7.8	19.3	4.4
4	3	181	Alto	22.5	36.8	-2.8	59.3	24.8
			Opus	11.3	48.0	-3.4	59.3	12.9
			Amistar	19.9	39.4	-0.7	59.3	39.8
			Caramba	26.9	32.4	-2.8	59.3	28.9
			Landmark	13.6	45.7	-4.4	59.3	14.1
4	4	159	Opus	25.4	36.3	-4.0	61.8	26.1
			Neon	48.2	13.6	-4.5	61.8	48.4
			Landmark	20.4	41.3	-2.3	61.8	24.7
2	1	183	Alto	0.6	17.0	-7.5	17.6	0.6
			Unix	5.9	11.7	-1.7	17.6	8.1
			Fortress	10.8	6.7	-2.6	17.6	11.4
			Amistar+Corbel	-0.9	18.4	-3.8	17.6	-0.5
2	2	183	Alto	3.4	39.8	-6.6	43.1	3.4
			Ensign	0.9	42.2	-7.5	43.1	1.0
			Amistar+Corbel	0.9	42.3	-3.3	43.1	2.5
2	3	157	Alto	0.0	6.2	-1.4	6.1	1.5
2	3	183	Alto	15.2	52.7	-2.4	67.9	20.2
			Opus	3.2	64.6	-3.8	67.9	4.7
			Opus team	7.1	60.8	-4.8	67.9	7.6
			Amistar+Corbel	25.7	42.2	-2.2	67.9	30.2
2	4	157	Alto	-5.9	16.9	-0.7	11.0	2.5
			Opus	2.5	8.4	-3.5	11.0	2.8

Brown rust parameter estimates - fungicide dose-response curves

Brown rust

Experiment	Leaf	Date	Product	a	b	k	a+b	a+be**k
4	1	181	Alto	20.3	31.6	-3.4	51.9	21.3
			Neon	28.1	23.8	-2.6	51.9	29.9
4	2	159	Alto	0.2	12.4	-11.1	12.6	0.2
			Opus	0.1	12.5	-13.1	12.6	0.1
			Folicur	0.1	12.5	-15.4	12.6	0.1
			Neon	0.5	12.1	-7.4	12.6	0.5
			Caramba	0.3	12.3	-10.6	12.6	0.3
4	2	181	Alto	-6.8	63.6	-1.2	56.8	11.4
			Opus	4.0	52.8	-3.8	56.8	5.1
			Folicur	5.8	51.0	-4.7	56.8	6.3
			Neon	-136.3	193.1	-0.2	56.8	21.5
			Caramba	6.8	50.0	-2.9	56.8	9.6
			Landmark	2.6	54.2	-5.4	56.8	2.9
4	3	159	Alto	0.4	22.5	-8.8	22.9	0.4
			Opus	0.7	22.2	-9.0	22.9	0.7
			Corbel	1.0	21.9	-8.3	22.9	0.9
			Folicur	0.4	22.5	-12.7	22.9	0.4
			Neon	1.5	21.4	-5.4	22.9	1.6
			Caramba	1.4	21.5	-9.1	22.9	1.4
4	3	181	Opus	-124.2	155.2	-0.2	31.0	2.6
			Corbel	-90.2	121.2	-0.2	31.0	11.4
			Folicur	5.7	25.3	-3.8	31.0	6.2
			Landmark	2.6	28.4	-3.9	31.0	3.2
4	4	159	Alto	0.6	10.5	-7.9	11.1	0.6
			Opus	0.6	10.5	-9.4	11.1	0.7
			Neon	1.6	9.5	-4.9	11.1	1.6
			Caramba	1.1	10.0	-8.4	11.1	1.1
8	1	175	Alto	1.8	8.9	-13.8	10.7	1.7
			Opus	0.6	10.1	-8.2	10.7	0.6
			Patrol	2.7	8.0	-4.4	10.7	2.8
			Ensign	1.3	9.4	-2.6	10.7	2.0
8	1	189	Alto	24.1	63.1	-3.4	87.2	26.2
			Amistar+Corbel	43.4	43.8	-6.3	87.2	43.5
8	2	175	Opus	0.2	37.5	-8.9	37.7	0.1
			Patrol	-25.1	62.8	-0.8	37.7	1.7
			Ensign	3.6	34.1	-2.5	37.7	6.4
			Opus team	0.2	37.5	-10.6	37.7	0.2
			Amistar+Corbel	1.0	36.7	-6.3	37.7	1.0
			Neon	6.4	31.3	-2.9	37.7	8.1
8	2	189	Alto	-14.4	114.4	-1.6	100.0	9.3
			Opus	1.9	98.1	-5.1	100.0	2.5
			Fortress	100.0	0.0	-0.2	100.0	100.0
			Opus team	0.3	99.7	-4.6	100.0	1.3
			Amistar+Corbel	19.7	80.3	-2.7	100.0	25.3
8	3	175	Alto	2.9	66.8	-8.4	69.7	2.8

			Patrol	1.5	68.2	-1.6	69.7	15.1
			Ensign	5.2	64.5	-3.5	69.7	7.0
			Opus team	1.4	68.3	-9.0	69.7	1.4
			Amistar+Corbel	1.8	67.9	-7.3	69.7	1.8

Green leaf area

Experiment	Leaf	Date	Product	a	b	k	a+b	a+be**k
4	1	181	Alto	64.8	-40.1	-5.0	24.7	64.5
4	2	159	Alto	62.4	17.6	-13.5	80.0	97.6
			Opus	98.3	-18.3	-11.7	80.0	98.3
			Neon	96.6	-16.6	-9.0	80.0	96.6
4	2	181	Alto	84.9	-77.9	-2.3	7.0	77.2
			Opus	86.4	-79.4	-4.7	7.0	85.7
			Corbel	67.7	-60.7	-3.0	7.0	64.5
			Folicur	81.6	-74.6	-6.2	7.0	81.4
			Neon	63.2	-56.2	-1.7	7.0	52.6
			Caramba	79.8	-72.8	-3.6	7.0	77.7
			Landmark	90.2	-83.2	-6.1	7.0	90.0
4	3	159	Alto	91.6	-42.8	-11.3	48.8	91.6
			Opus	92.5	-43.7	-6.6	48.8	92.5
			Corbel	90.7	-41.9	-6.5	48.8	90.7
			Folicur	91.3	-42.5	-9.0	48.8	91.3
			Neon	83.9	-35.1	-6.9	48.8	83.9
4	3	181	Alto	125.9	-125.8	-0.6	0.1	53.8
			Opus	74.6	-74.5	-2.1	0.1	65.8
			Folicur	48.9	-48.8	-4.4	0.1	48.3
			Caramba	66.3	-66.2	-1.1	0.1	44.7
			Landmark	72.8	-72.7	-3.9	0.1	71.3
4	4	159	Opus	59.2	-45.9	-3.6	13.3	58.0
			Neon	30.3	-17.0	-4.3	13.3	30.1
			Landmark	67.1	-53.8	-2.1	13.3	60.5
8	1	175	Alto	94.3	-11.1	-7.7	83.2	94.2
			Patrol	67.4	15.8	1.3	83.2	94.4
			Ensign	95.8	-12.6	-2.3	83.2	94.5
			Opus team	96.0	-12.8	-3.4	83.2	95.5
8	1	189	Alto	75.9	-63.1	-3.4	12.8	73.8
			Amistar+Corbel	56.6	-43.8	-6.3	12.8	56.5
8	2	175	Alto	88.2	-34.0	-4.6	54.2	87.8
			Patrol	181.2	-127.0	-0.4	54.2	91.2
			Ensign	90.2	-36.0	-2.8	54.2	88.0
			Opus team	94.2	-40.0	-4.9	54.2	93.8
			Neon	102.1	-47.9	-0.8	54.2	79.6
8	2	189	Alto	86.1	-86.1	-2.1	0.0	75.4
			Opus	79.0	-79.0	-4.9	0.0	78.4
			Ensign	238.6	-238.6	-0.2	0.0	48.2
			Fortress	0.0	0.0	-0.2	0.0	0.0
			Opus team	85.6	-85.6	-4.0	0.0	84.1
			Amistar+Corbel	70.1	-70.1	-2.7	0.0	65.3
8	3	175	Opus	71.3	-54.3	-4.4	17.0	70.6

			Ensign	73.0	-56.0	-3.0	17.0	70.1
			Opus team	71.1	-54.1	-7.0	17.0	71.0
			Amistar+Corbel	88.8	-71.8	-1.5	17.0	72.3

Grain yield

Experiment	Product	a	b	k	a+b	a+be**k
4	Alto	7.8	-2.6	-3.7	5.2	7.8
	Opus	8.4	-3.2	-3.4	5.2	8.3
	Amistar	9.3	-4.1	-1.0	5.2	7.9
	Neon	7.0	-1.8	-2.9	5.2	7.0
	Caramba	7.8	-2.6	-4.0	5.2	7.8
	Landmark	9.4	-4.2	-4.0	5.2	9.3
8	Alto	5.1	-2.5	-3.7	2.6	5.0
	Opus	5.4	-2.8	-4.1	2.6	5.4
	Patrol	4.6	-2.0	-2.2	2.6	4.4
	Ensign	6.0	-3.4	-1.4	2.6	5.2
	Opus team	6.1	-3.5	-2.7	2.6	5.9
	Amistar+Corbel	5.8	-3.2	-1.9	2.6	5.3
	Neon	4.2	-1.6	-2.8	2.6	4.1

Specific weight

Experiment	Product	a	b	k	a+b	a+be**k
4	Alto	73.0	-6.6	-2.3	66.4	72.3
	Opus	77.0	-10.6	-1.2	66.4	73.6
	Amistar	75.5	-9.1	-1.2	66.4	72.6
	Neon	70.4	-4.0	-2.2	66.4	70.0
	Caramba	72.0	-5.6	-2.7	66.4	71.6
	Landmark	75.7	-9.3	-3.7	66.4	75.4
8	Opus	71.9	-8.2	-4.2	63.7	71.8
	Patrol	69.5	-5.8	-2.3	63.7	69.0
	Ensign	558.5	-494.8	0.0	63.7	71.6
	Opus team	74.1	-10.4	-2.8	63.7	73.5
	Amistar+Corbel	72.5	-8.8	-1.8	63.7	71.2
	Neon	69.2	-5.5	-1.7	63.7	68.2

Powdery mildew parameter estimates - variety by dose-response interactions

Mildew

Experiment	Leaf	Date	Variety	a	b	k	a+b	a+be**k
1	4	154	Brigadier	0.6	5.9	-6.93	6.5	0.7
			Buster	0.1	0.8	-6.93	0.9	0.1
			Genesis	0.0	5.0	-6.93	5.0	0.0
			Hunter	0.0	0.1	-6.93	0.1	0.0
3	2	191	Buster	-1.7	7.0	-0.81	5.3	1.4
	3	169	Buster	1.0	5.3	-3.89	6.3	1.1
	4	169	Buster	2.9	6.5	-6.22	9.4	3.0

Green leaf area

Experiment	Leaf	Date	Variety	a	b	k	a+b	a+be**k
1	4	154	Beaufort	19.6	-17.5	-8.62	2.1	19.6
			Brigadier	33.2	-21.8	-8.62	11.4	33.2
			Genesis	48.3	-25.3	-8.62	23.0	48.3
3	2	191	Brigadier	65.8	-71.7	-2.18	-5.9	57.7
			Buster	80.4	-70.0	-2.18	10.4	72.5
			Hunter	81.5	-61.2	-2.18	20.3	74.6
			Rialto	72.1	-61.9	-2.18	10.2	65.1
			Riband	27.8	-32.7	-2.18	-4.9	24.1
			Spark	84.8	-69.7	-2.18	15.1	77.0
	3	169	Brigadier	92.7	-53.4	-2.98	39.3	90.0
			Buster	92.3	-34.3	-2.98	58.0	90.5
			Hunter	92.0	-18.1	-2.98	73.9	91.1
			Rialto	93.3	-22.9	-2.98	70.4	92.2
			Riband	76.3	-62.3	-2.98	14.0	73.1
			Spark	95.4	-30.5	-2.98	64.9	93.9
	4	169	Brigadier	79.7	-79.6	-0.89	0.1	47.1
			Buster	64.9	-59.9	-0.89	5.0	40.3
			Hunter	90.5	-73.9	-0.89	16.6	60.2
			Rialto	86.2	-60.3	-0.89	25.9	61.5
			Riband	22.2	-23.8	-0.89	-1.6	12.4
			Spark	82.8	-71.4	-0.89	11.4	53.6

Grain yield

Experiment	Variety	a	b	k	a+b	a+be**k
1	Beaufort	9.1	-2.2	-2.67	6.9	8.9
	Brigadier	8.4	-2.6	-2.67	5.8	8.3
	Buster	8.8	-2.2	-2.67	6.6	8.7
	Genesis	7.9	-1.6	-2.67	6.3	7.8
	Hereward	8.4	-1.4	-2.67	7.0	8.3
	Hunter	8.3	-2.1	-2.67	6.2	8.1
3	Brigadier	8.2	-3.2	-2.82	5.0	8.0
	Buster	8.6	-1.8	-2.82	6.8	8.5
	Hunter	8.0	-1.7	-2.82	6.3	7.9
	Riband	7.4	-2.0	-2.82	5.4	7.3
	Rialto	9.1	-2.0	-2.82	7.1	9.0
	Spark	8.1	-1.7	-2.82	6.4	8.0

Specific weight

Experiment	Variety	a	b	k	a+b	a+be**k
1	Beaufort	72.4	-4.3	-3.38	68.1	72.2
	Brigadier	69.8	-6.2	-3.38	63.6	69.6
	Buster	69.9	-1.8	-3.38	68.1	69.9
	Genesis	69.7	-2.9	-3.38	66.8	69.6
	Hunter	68.7	-3.6	-3.38	65.1	68.6
3	Brigadier	69.6	-6.3	-2.42	63.3	69.0
	Buster	72.2	-4.4	-2.42	67.8	71.9

	Hunter	70.4	-4.9	-2.42	65.5	70.0
	Riband	67.5	-7.0	-2.42	60.5	66.8
	Rialto	73.4	-3.0	-2.42	70.4	73.1
	Spark	75.9	-4.1	-2.42	71.8	75.6

S. nodorum parameter estimates - variety by dose-response interactions

S. nodorum

Experiment	Leaf	Date	Variety	a	b	k	a+b	a+be**k
6	2	168	Admiral	0.0	39.0	-6.09	39.0	0.1
			Brigadier	6.1	33.9	-6.09	40.0	6.2
			Hunter	3.5	8.0	-6.09	11.5	3.6
			Mercia	0.4	18.3	-6.09	18.7	0.4
			Spark	0.2	11.1	-6.09	11.3	0.3
	3	168	Admiral	-14.9	76.0	-2.01	61.1	-4.7
			Brigadier	6.3	71.1	-2.01	77.4	15.8
			Hunter	5.6	32.0	-2.01	37.6	9.9

Green leaf area

Experiment	Leaf	Date	Variety	a	b	k	a+b	a+be**k
6	2	168	Admiral	99.8	-55.4	-5.44	44.4	99.6
			Brigadier	85.1	-65.2	-5.44	19.9	84.8
			Hunter	96.0	-26.1	-5.44	69.9	95.8
			Hussar	87.5	-50.7	-5.44	36.8	87.3
			Mercia	98.6	-49.2	-5.44	49.4	98.4
			Spark	98.3	-19.4	-5.44	78.9	98.3
	3	168	Admiral	107.0	-94.9	-2.51	12.1	99.2
			Hunter	84.0	-78.2	-2.51	5.8	77.6
			Hussar	38.9	-45.9	-2.51	-7.0	35.1
			Mercia	83.8	-87.1	-2.51	-3.3	76.7
			Spark	92.7	-67.7	-2.51	25.0	87.2

S. nodorum glume blotch on the ear

Experiment	Variety	a	b	k	a+b	a+be**k
5	Brigadier	9.8	25.3	-3.79	35.1	10.3
	Hunter	4.3	4.2	-3.79	8.5	4.4
6	Admiral	45.8	13.5	-2.80	59.3	46.6
	Hunter	19.9	11.5	-2.80	31.4	20.6
	Hussar	20.5	10.0	-2.80	30.5	21.1
	Spark	18.2	8.3	-2.80	26.5	18.7

Grain yield

Experiment	Variety	a	b	k	a+b	a+be**k
5	Admiral	7.4	-1.2	-2.13	6.1	7.3
	Brigadier	6.7	-1.4	-2.13	5.3	6.5
	Hunter	7.3	-0.9	-2.13	6.4	7.2
	Hussar	7.4	-1.0	-2.13	6.4	7.2

	Mercia	6.9	-0.8	-2.13	6.1	6.9
	Spark	7.3	-0.9	-2.13	6.4	7.2
6	Brigadier	3.5	-2.2	-2.57	1.3	3.3
	Hunter	4.5	-2.0	-2.57	2.5	4.4
	Hussar	4.6	-1.9	-2.57	2.7	4.4
	Mercia	4.6	-2.3	-2.57	2.3	4.5
	Spark	5.5	-2.3	-2.57	3.2	5.4
7	Admiral	5.0	-1.3	-1.02	3.7	5.0
	Brigadier	5.3	-2.3	-1.02	3.0	5.3
	Hunter	5.8	-1.3	-1.02	4.5	5.4
	Hussar	5.3	-1.4	-1.02	3.9	5.2
	Mercia	4.7	-1.0	-1.02	3.7	4.6
	Spark	5.2	-1.1	-1.02	4.1	5.0

Specific weight

Experiment	Variety	a	b	k	a+b	a+be**k
5	Admiral	72.1	-2.8	-3.55	69.3	72.1
	Brigadier	70.9	-3.4	-3.55	67.5	59.5
	Hunter	63.3	-3.7	-3.55	59.6	63.2
6	Admiral	55.5	-6.7	-3.43	48.8	55.2
	Brigadier	63.8	-5.6	-3.43	59.6	63.2
	Mercia	69.2	-4.6	-3.43	64.6	69.1
	Spark	69.9	-5.1	-3.43	64.8	69.8
7	Admiral	60.9	-4.8	-1.64	56.1	60.8
	Brigadier	59.9	-9.5	-1.64	50.4	59.5
	Hunter	63.3	-3.7	-1.64	59.6	63.2
	Hussar	62.5	-5.1	-1.64	57.4	62.3
	Mercia	64.6	-2.1	-1.64	62.5	64.5
	Spark	69.4	-3.4	-1.64	66.0	69.3

Brown rust parameter estimates - variety by dose-response interactions

Brown rust

Experiment	Leaf	Date	Variety	Eradicant/ Protectant	a	b	k	a+b	a+be**k
4	1	184	Buster	Protectant	7.7	37.9	-5.55	45.6	7.9
			Riband	Protectant	5.9	12.8	-5.55	18.6	5.9
			Spark	Protectant	3.6	3.1	-5.55	6.6	3.6
4	2	184	Buster	Eradicant	3.8	45.6	-5.03	49.3	4.1
			Riband	Eradicant	2.8	29.6	-5.03	32.4	3.0
			Spark	Eradicant	1.1	12.6	-5.03	13.8	1.2
4	3	162	Buster	Eradicant	0.2	8.9	-10.97	9.1	0.2
		184	Buster	Eradicant	3.8	33.2	-4.83	37.0	4.1
			Riband	Eradicant	2.1	14.0	-4.83	16.1	2.2
			Spark	Eradicant	-0.3	16.6	-4.83	16.3	-0.2
4	4	162	Buster	Eradicant	0.4	5.4	-15.05	5.8	0.4

Green leaf area

Experiment	Leaf	Date	Variety	Eradicant/ Protectant	a	b	k	a+b	a+be**k
4	1	184	Buster	Protectant	73.7	-42.4	-4.71	31.4	73.3
			Hunter	Protectant	76.4	-2.8	-4.71	73.5	76.3
			Rialto	Protectant	77.3	-6.8	-4.71	70.5	77.3
			Riband	Protectant	71.6	-23.2	-4.71	48.5	71.4
4	2	184	Abbot	Eradicant	87.1	-17.0	-4.38	70.0	86.8
			Buster	Eradicant	78.3	-70.4	-4.38	7.9	77.5
			Hunter	Eradicant	86.2	-9.4	-4.38	76.8	86.1
			Rialto	Eradicant	83.6	-17.5	-4.38	66.0	83.3
			Riband	Eradicant	75.0	-61.7	-4.38	13.3	74.2
			Spark	Eradicant	82.6	-22.5	-4.38	60.1	82.3
4	3	162	Abbot	Eradicant	91.8	-3.5	-18.10	88.4	91.9
			Buster	Eradicant	86.7	-14.3	-18.10	72.4	86.7
			Hunter	Eradicant	93.1	-4.3	-18.10	88.8	93.1
			Riband	Eradicant	85.8	-10.5	-18.10	75.3	85.8
4		184	Abbot	Eradicant	56.8	-31.8	-2.17	25.0	53.2
			Buster	Eradicant	41.3	-42.6	-2.17	-1.3	36.5
			Hunter	Eradicant	72.3	-28.5	-2.17	43.8	69.1
			Rialto	Eradicant	66.0	-47.7	-2.17	18.3	60.5
			Riband	Eradicant	22.7	-19.2	-2.17	3.5	20.5
			Spark	Eradicant	64.8	-43.7	-2.17	21.1	59.8
4	4	162	Hunter	Eradicant	76.7	-11.7	-8.44	65.1	76.7
			Riband	Eradicant	45.7	-17.5	-8.44	28.3	45.7

Septoria tritici parameter estimates - variety by dose-response interactions

Septoria tritici

Experiment	Leaf	Date	Variety	Eradicant/ Protectant	a	b	k	a+b	a+be**k
1	1	188	Beaufort	Protectant	6.6	43.4	-3.86	50.0	7.5
			Brigadier	Protectant	14.9	52.7	-3.86	67.6	16.1
			Buster	Protectant	2.9	35.5	-3.86	38.4	3.6
			Hereward	Protectant	14.4	18.8	-3.86	33.2	14.8
			Hunter	Protectant	27.1	27.8	-3.86	54.9	27.7
	2	154	Beaufort	Eradicant	3.1	5.5	-7.99	8.6	3.1
			Brigadier	Eradicant	5.7	5.0	-7.99	10.7	5.7
			Genesis	Eradicant	1.2	2.2	-7.99	3.4	1.2
		188	Beaufort	Eradicant	10.5	43.1	-4.60	53.6	11.0
			Brigadier	Eradicant	9.5	61.5	-4.60	71.0	10.1
			Buster	Eradicant	5.5	51.8	-4.60	57.3	6.0
			Genesis	Eradicant	2.2	55.0	-4.60	57.2	2.8
			Hereward	Eradicant	3.2	43.2	-4.60	46.4	3.6
			Hunter	Eradicant	2.6	57.8	-4.60	60.4	3.2
	3	154	Beaufort	Eradicant	7.8	16.9	-5.73	24.7	7.9
			Brigadier	Eradicant	8.0	8.0	-5.73	16.0	8.1
			Buster	Eradicant	8.5	6.9	-5.73	15.4	8.5
			Hunter	Eradicant	3.6	2.7	-5.73	6.3	3.6

		188	Genesis	Eradicant	22.7	53.2	-4.09	75.9	23.6
			Hereward	Eradicant	15.3	56.8	-4.09	72.1	16.2
			Hunter	Eradicant	19.8	55.2	-4.09	75.0	20.7
	4	154	Beaufort	Eradicant	30.5	33.5	-3388.11	64.0	30.5
			Brigadier	Eradicant	27.1	30.3	-3388.11	57.4	27.1
			Genesis	Eradicant	19.9	6.5	-3388.11	26.4	19.9
			Hunter	Eradicant	18.4	17.7	-3388.11	36.1	18.4
3	1	169	Riband	Protectant	-0.6	6.1	-1.15	5.5	1.3
		191	Buster	Protectant	18.8	42.8	-4.23	61.6	19.4
			Hunter	Protectant	25.2	27.5	-4.23	52.7	25.6
			Rialto	Protectant	19.6	27.1	-4.23	46.7	20.0
			Riband	Protectant	58.6	34.6	-4.23	93.2	59.1
			Spark	Protectant	16.3	30.5	-4.23	46.8	16.7
	2	169	Brigadier	Eradicant	-0.5	16.5	-3.82	16.0	-0.1
			Buster	Eradicant	0.8	9.9	-3.82	10.7	1.0
			Hunter	Eradicant	-0.2	6.5	-3.82	6.3	-0.1
			Rialto	Eradicant	0.7	7.4	-3.82	8.1	0.8
			Riband	Eradicant	3.1	27.7	-3.82	30.8	3.8
			Spark	Eradicant	0.0	6.3	-3.82	6.3	0.1
		191	Buster	Eradicant	16.3	58.5	-2.94	74.8	19.4
			Hunter	Eradicant	14.5	52.6	-2.94	67.1	17.3
			Rialto	Eradicant	22.4	52.4	-2.94	74.8	25.2
			Spark	Eradicant	11.6	57.1	-2.94	68.7	14.6
	3	169	Brigadier	Eradicant	1.9	41.6	-2.96	43.5	4.0
			Buster	Eradicant	4.7	24.6	-2.96	29.3	5.9

Experiment	Leaf	Date	Variety	Eradicant/ Protectant	a	b	k	a+b	a+be**k
3	3	169	Buster	Eradicant	4.7	24.6	-2.96	29.3	5.9
			Hunter	Eradicant	2.7	15.2	-2.96	17.9	3.5
			Rialto	Eradicant	2.6	17.8	-2.96	20.4	3.5
			Riband	Eradicant	14.5	57.0	-2.96	71.5	17.5
			Spark	Eradicant	0.2	21.0	-2.96	21.2	1.3
	4	169	Buster	Eradicant	13.1	52.8	-2.13	65.9	19.4
			Hunter	Eradicant	13.4	32.7	-2.13	46.1	17.3
			Rialto	Eradicant	16.4	33.6	-2.13	50.0	20.4
			Spark	Eradicant	15.9	31.9	-2.13	47.8	19.7
4	2	184	Abbot	Eradicant	0.8	15.7	-2.86	16.5	1.8
			Buster	Eradicant	3.5	28.1	-2.86	31.6	5.1
			Hunter	Eradicant	3.4	8.0	-2.86	11.4	3.8
			Rialto	Eradicant	3.8	10.1	-2.86	13.9	4.3
			Riband	Eradicant	7.9	28.2	-2.86	36.1	9.5
			Spark	Eradicant	1.1	8.5	-2.86	9.6	1.6
	3	162	Abbot	Eradicant	2.7	2.7	-6.08	5.4	2.7
			Buster	Eradicant	5.5	6.8	-6.08	12.3	5.5
			Riband	Eradicant	5.3	7.0	-6.08	12.3	5.4
		184	Abbot	Eradicant	10.5	39.7	-1.59	50.2	18.7
			Buster	Eradicant	23.6	32.1	-1.59	55.7	30.2
			Hunter	Eradicant	1.3	33.3	-1.59	34.6	8.1
			Rialto	Eradicant	7.6	36.1	-1.59	43.7	15.0
			Riband	Eradicant	46.6	19.8	-1.59	66.4	50.7

			Spark	Eradicant	-1.2	33.9	-1.59	32.7	5.7
	4	162	Buster	Eradicant	21.6	27.0	-1.31	48.6	28.8
			Hunter	Eradicant	4.8	12.6	-1.31	17.4	8.2

The Home-Grown Cereals Authority is a public body set up by the Cereals Marketing Act 1965. A number of important amendments to the Act were made by the Agriculture Act 1986 and the Cereals Marketing Act (Application to Oilseeds) Order 1989. The Act, as amended, defines the Authority's functions, constitution and the specific functions which it may undertake for the purpose of improving the production and marketing of home-grown cereals and oilseeds. In 1990 the HGCA Oilseeds Levy Scheme was introduced to fund research and development.

As well as sponsoring research and development in relation to both cereals and oilseeds, the Authority's other functions are:-

- providing a market information service for cereals and oilseeds;
- developing UK cereals exporting capabilities;
- promoting increased consumption of cereal based products in the home market and overseas.

The Authority is funded principally by levies paid by growers of cereals and oilseeds and by cereal dealers and processors.

The Authority administers its R&D function with the assistance of two Advisory Committees, one dealing with cereals and the other with oilseeds R&D. Cereals growers, dealers and processors all contribute in differing proportions to the funding of cereals R&D and all these sectors are represented, therefore, on the R&D Advisory Committee for Cereals. The R&D Advisory Committee for Oilseeds represents the interests of oilseed growers who are the sole funders of oilseeds R&D.

Details of subject areas of interest to both committees are published in strategy documents. Reports of all funded R&D are also published and promoted within the industry.

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