Exakt-Versuche in der Kartoffel 2015

2015 Exakt-Versuche in der Kartoffel
Effizienznachweis bei Fungizidanwendungen mit CropCover CC-1000
Versuchsdurchführung Agro Nord

Bernhard Sack

15.12.2015

Versuchsstandort / Sorte

- Sanitz
- Albatros

Versuchsanlage

VGL	Interval l		T1	T2	T3	T4	T5	T6	T7	T8
1		Kontrolle								
2	7-tägig	betriebsüblich 100%	Infinito 1,6	Revus Top 0,6	Dithane NeoTec 1,8	Vondac 2,0	Valis M 2,5	Tanos 0,7	Ranman Top 0,6	Ranman Top 0,6
3	7-tägig	betriebsüblich 100% TM CropCover-1000 (2 l/ha)	Infinito 1,6	Revus Top 0,6	Dithane NeoTec 1,8	Vondac 2,0	Valis M 2,5	Tanos 0,7	Ranman Top 0,6	Ranman Top 0,6
4	7-tägig	betriebsüblich 50% TM CropCover-1000 (2 l/ha)	Infinito 0,8	Revus Top 0,3	Dithane NeoTec 0,9	Vondac 1,0	Valis M 1,25	Tanos 0,35	Ranman Top 0,3	Ranman Top 0,3
5	10-tägig	betriebsüblich 100% TM CropCover-1000 (2 l/ha)	Infinito 1,6	Revus Top 0,6	Dithane NeoTec 1,8	Valis M 2,5	Tanos 0,7	Ranman Top 0,6		

Versuchsergebnis - Stärkeertrag

VGL+	Intervall		Ertrag		Stärkegehalt		Stärkeertrag	
			dt / ha	relativ	%	relativ	dt/ha	relativ
1		Kontrolle	439,1	100,0	22,5	100,0	98,7	100,0
2	7-tägig	betriebsüblich 100%	511,2	116,4	24,6	109,3	125,6	127,3
3	7-tägig	betriebsüblich 100% TM CropCover-1000 (2 l/ha)	569,5	129,7	25,6	113,8	145,6 + 20	147,6
4	7-tägig	betriebsüblich 50% TM CropCover-1000 (2 l/ha)	545,5	124,2	24,2	107,5	131,7 + 6	133,5
5	10-tägig	betriebsüblich 100% TM CropCover-1000 (2 l/ha)	555,6	126,5	24,8	110,5	137,9 + 12	139,8

Versuchseinschätzung

- signifikanter Stärkemehrertrag in den CropCover behandelten Varianten
- bessere Wirkstoffverfügbarkeit durch verbesserte Haftung spielt eine äußerst wichtige Rolle
- unterschiedliche Spritzstrategien je nach Witterung wählbar
- Einsatz von CropCover CC-1000 wirtschaftlich sinnvoll

Vielen Dank für Ihre Aufmerksamkeit!

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- Anlagen: Versuchsrohdaten

Fungizidversuch Kartoffeln 2015

Auftraggeber	amynova polymers GmbH Herr Sack Chemiepark Bitterfeld - Arial A - OT Wolfen Kunstseidestraße 6 06766 Bitterfeld-Wolfen
Prüfeinrichtung	agro nord Prüfstelle für Kartoffelforschung, Feldversuchswesen, Pflanzenschutz und Phytodiagnostik 18190 Groß Lüsewitz
Versuchsleiter	R. Kürzinger
Versuchsort	Sanitz (Versuchsfläche von agro nord)
Kultur	Kartoffel
Sorte	Albatros
Versuchsglieder	5
Wiederholungen	4
Parzellengröße	4 reihig (7 m x 3 m = 21 m²)
Reihenabstand	75 cm
Knollenabstand in der Reihe	28 cm
Versuchsanlage	randomisierte Blockanlage (siehe Lageplan)
Vorfrucht	Winterweizen
Vor – Vorfrucht	Winterweizen
Bodenart	lS / 35
N-Düngung	100 kg N
Pflanztermin (Handpflanzung)	06.05.2015
Auflauftermin	01.06.2015
Applikationsgerät	Parzellenspritzgerät PL 1
Düsentyp	AirMix 110-03
Betriebsdruck	3,2 kp/cm²
Applikationsmethode	Spritzen
Wasseraufwandmenge	300 l/ha
Mittelaufwandmenge	entsprechend Prüfplan

Fungizidversuch Kartoffeln 2015

Pflanzenschutz	Herbizidbehandlung - Sencor WG 0,5 kg/ha + Bandur 4,0 l/ha Insektizidbehandlungen - Alverde 0,25 kg/ha - Biscaya 0,3 l/ha - Teppeki 0,16 kg/ha
Warnmeldung Krautfäule	22.06.2015
künstliche Infektion (Phytophthora)	15.07.2015
Bonituren	Kraut- und Stängelbefall und Phytotoxizität 1. 16.06.2015 5. 14.07.2015 9. 13.08.2015 2. 23.06.2015 6. 23.07.2015 10. 20.08.2015 3. 30.06.2015 7. 30.07.2015 11. 27.08.2015 4. 07.07.2015 8. 06.08.2015 12. 04.09.2015
Ernte	15.09.2015
Aufbereitung (Ertrag, Fraktion, Stärke, Braunfäule)	28.09.2015
Wetterdaten	April - September

Applikationen und Witterungsbedingungen 2015

Behandlung	Datum	Temperatur °C	Luftfeuchte %	Windgeschwindigkeit m / s
VGL 2 - 4	**7-tägig**			
1	30.06.	18,4	68	0,6
2	07.07.	19,5	69	0,5
3	14.07.	19,4	76	0,5
4	22.07.	21,0	62	0,3
5	29.07.	17,2	69	0,8
6	06.08.	22,8	65	0,3
7	13.08.	21,9	58	0,3
8	20.08.	22,2	49	0,2
VGL 5	**10-tägig**			
1	30.06.	18,4	68	0,6
2	10.07.	16,3	61	0,7
3	20.07.	19,1	72	0,5
4	31.07.	16,0	57	0,6
5	10.08.	23,0	59	0,4
6	20.08.	22,2	49	0,2

Bemerkungen zum Verlauf des Versuchsjahres 2015

Der April war sehr trocken, mit 23 mm Niederschlag standen den Pflanzen nur 42 % der üblichen Wassermenge zur Verfügung. Im Mai konnte dieses Wassermanko nicht kompensiert werden. Starke Trockenheit trat von Anfang Juni bis zur 3. Junidekade auf. In der 3. Junidekade stand erstmals genügend Wasser zur Verfügung. Der Juli war wiederum durch starke Trockenheit gekennzeichnet. Nach dem 4. August war der Monat in der 1. und 2. Dekade wiederum durch Trockenheit geprägt. Das Versuchsjahr war durch eine sehr geringe Infektionsstärke (Phytophthora) gezeichnet. Nur die starke Taubildung am Standort hat die Pflanzen vor dem Trockenstress geschützt. Selbst künstliche Infektionen mit Phytophthora Suspension im Juli führten nicht zu einem epidemischen Auftreten. Auf Grund des sehr geringen Infektionsdruckes wirkten alle Mittel sehr gut, nur die unbehandelten Kontrollen wurden stärker befallen.

Fungizidversuch Kartoffeln 2015

Versuchsplan

Var. 1.0.: ohne PSM-Einsatz zur Kontrolle

Var. 1.1.: betriebsübliche Variante mit 4 Wiederholungen mit noch festzulegenden Fungiziden

Var. 1.2.: Variante 1.1 mit zusätzlich 2 l/ha CropCover CC-1000 zu jeder Fungizidspritzung

Var. 1.3.: Variante 2 mit 50 % Fungizidreduktion

Var. 1.4.: Variante 2.1. mit verlängerten Spritzfolgen, statt z.B. 8 Anwendungen nur 6, bzw. statt 6 nur 5

Bonitur: Krankheitsdruck, Kartoffelertrag und Stärkegehalt

VGL	Intervall		T1	T2	T3	T4	T5	T6	T7	T8
1		Kontrolle								
2	7-tägig	betriebsüblich 100%	Infinito 1,6	Revus Top 0,6	Dithane NeoTec 1,8	Vondac 2,0	Valis M 2,5	Tanos 0,7	Ranman Top 0,6	Ranman Top 0,6
3	7-tägig	betriebsüblich 100% TM CropCover-1000 (2 l/ha)	Infinito 1,6	Revus Top 0,6	Dithane NeoTec 1,8	Vondac 2,0	Valis M 2,5	Tanos 0,7	Ranman Top 0,6	Ranman Top 0,6
4	7-tägig	betriebsüblich 50% TM CropCover-1000 (2 l/ha)	Infinito 0,8	Revus Top 0,3	Dithane NeoTec 0,9	Vondac 1,0	Valis M 1,25	Tanos 0,35	Ranman Top 0,3	Ranman Top 0,3
5	10-tägig	betriebsüblich 100% TM CropCover-1000 (2 l/ha)	Infinito 1,6	Revus Top 0,6	Dithane NeoTec 1,8	Valis M 2,5	Tanos 0,7	Ranman Top 0,6		

Fungizidversuch Kartoffeln 2015

Sortenbeschreibung

Bezeichnung	
Sorte	**Albatros**
Reifegruppe	III. = mittelfrüh
Rhiz. Wipfelroller	nicht ermittelt
Krautfäule	5 = mittel
Ertrag (in der Reifegruppe)	5 = mittel
Stärkegehalt	8 = hoch bis sehr hoch
Stärkeertrag	7 = hoch
Knollenertrag	5 = mittel
Knollenzahl	5 = mittel
Übergrößen	5 = mittel
Untergrößen	3 = niedrig
Verwendungszweck	Wirtschaftskartoffel
Züchter	NORIKA
Zulassungsjahr	1996

Fungizidversuch Kartoffeln 2015

Lageplan - Sorte: Albatros

5	1	4	3	2
3	4	5	2	1
2	3	1	5	4
1	2	3	4	5

Fungizidversuch Kartoffeln 2015

Zusammenfassung - Krautfäule- und Stängelfäulebonitur

Bemerkung: bis 16.07.2015 kein Befall mit Kraut- und Stängelfäule

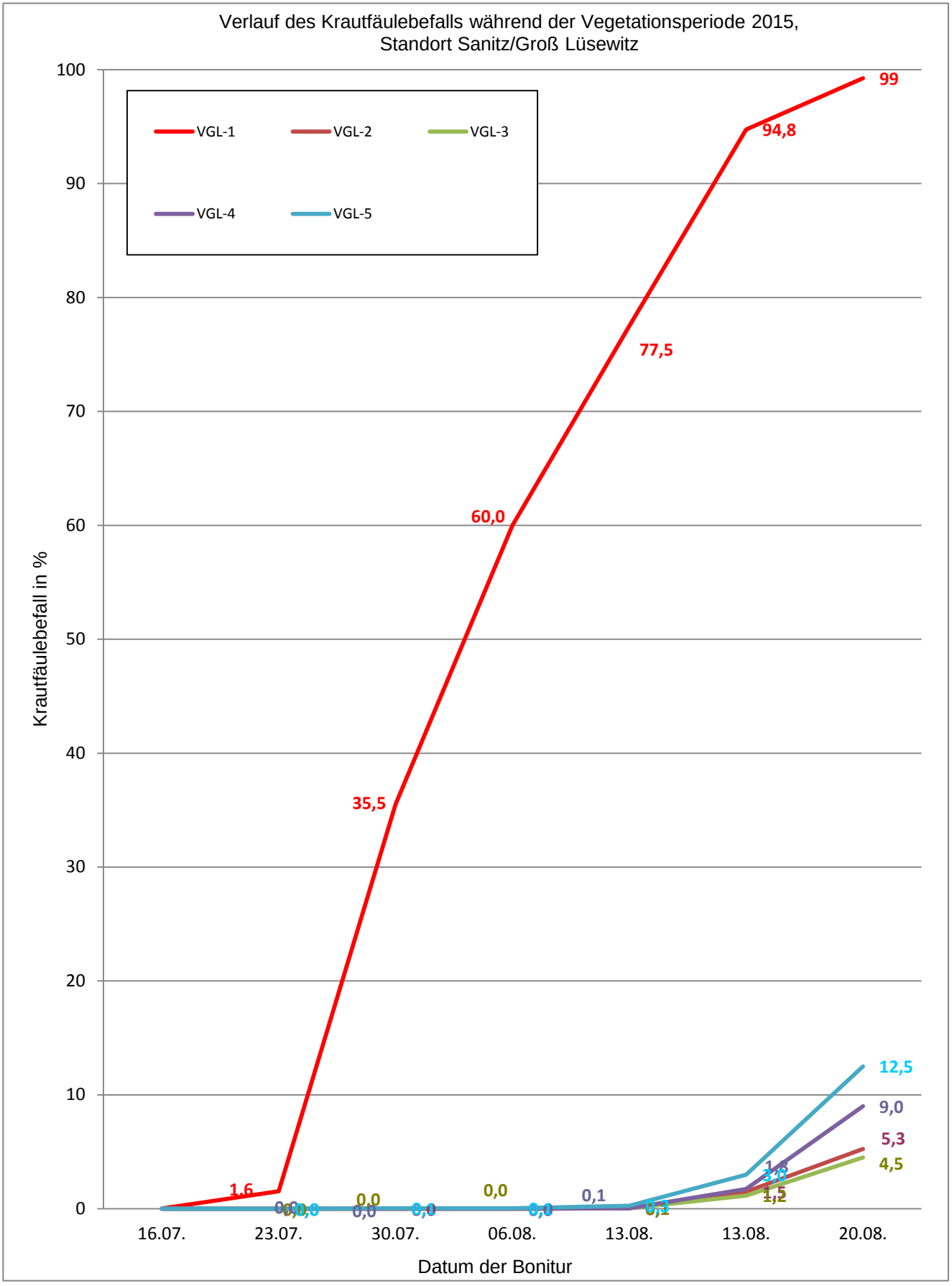
VGL	Krautfäule- und Stängelfäulebefall (%)													
	23.07.2015		30.07.2015		06.08.2015		13.08.2015		20.08.2015		27.08.2015		04.09.2015	
	BBCH 629		BBCH 631		BBCH 71		BBCH 75		BBCH 75		BBCH 721		BBCH 7N9	
	Kf.	Stf.	Kf.	Stf.	Kf.	Stf.	Kf.	Stf.	Kf.	Stf.	Kf.	Stf.	Kf.	Stf.
1	0,0	0,0	1,6	0,0	35,5	0,2	60,0	0,8	77,5	2,3	94,8	9,5	99,3	37,5
2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	1,5	0,0	5,3	0,3
3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	1,2	0,0	4,5	0,2
4	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	1,8	0,0	9,0	0,3
5	0,0	0,0	0,0	0,0	0,1	0,0	0,1	0,0	0,3	0,0	3,0	0,1	12,5	0,5

Bonitur: Krautfäule- und Stängelfäulebonitur

VGL		Krautfäule- und Stängelfäulebefall (%)													
		23.07.2015		30.07.2015		06.08.2015		13.08.2015		20.08.2015		27.08.2015		04.09.2015	
		BBCH 629		BBCH 631		BBCH 71		BBCH 75		BBCH 75		BBCH 721		BBCH 7N9	
		Kf.	Stf.	Kf.	Stf.	Kf.	Stf.	Kf.	Stf.	Kf.	Stf.	Kf.	Stf.	Kf.	Stf.
1	1	0,1	0,0	5,0	0,0	45,0	0,1	65,0	1,0	80,0	2,0	99,0	8,0	100,0	30,0
	2	0,0	0,0	0,1	0,0	12,0	0,0	45,0	0,0	65,0	1,0	95,0	5,0	99,0	35,0
	3	0,0	0,0	1,0	0,0	50,0	0,5	70,0	2,0	85,0	5,0	95,0	15,0	100,0	40,0
	4	0,0	0,0	0,1	0,0	35,0	0,0	60,0	0,1	80,0	1,0	90,0	10,0	98,0	45,0
	MW	0,0	0,0	1,6	0,0	35,5	0,2	60,0	0,8	77,5	2,3	94,8	9,5	99,3	37,5
2	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,5	0,0	5,0	0,0
	2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	2,0	0,0	7,0	0,5
	3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	3,0	0,0	7,0	0,5
	4	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,5	0,0	2,0	0,0
	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	1,5	0,0	5,3	0,3
3	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,5	0,0	4,0	0,1
	2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	1,0	0,0	6,0	0,1
	3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	1,0	0,0
	4	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	3,0	0,0	7,0	0,5
	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	1,2	0,0	4,5	0,2
4	1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,0	0,0	10,0	0,1
	2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	2,0	0,0	6,0	0,5
	3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	3,0	0,0	12,0	0,5
	4	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	1,0	0,0	8,0	0,1
	MW	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	1,8	0,0	9,0	0,3
5	1	0,0	0,0	0,0	0,0	0,1	0,0	0,1	0,0	0,5	0,0	5,0	0,1	15,0	1,0
	2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,0	2,0	0,0	12,0	0,5
	3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,0	0,0	8,0	0,1
	4	0,0	0,0	0,0	0,0	0,1	0,0	0,1	0,0	0,5	0,0	4,0	0,1	15,0	0,5
	MW	0,0	0,0	0,0	0,0	0,1	0,0	0,1	0,0	0,3	0,0	3,0	0,1	12,5	0,5

Fungizidversuch Kartoffeln 2015

Grafik - Entwicklung des Krautfäulebefalls



Fungizidversuch Kartoffeln 2015

Zusammenfassung: Ertrag, Fraktionierung, Braunfäule, Stärkegehalt

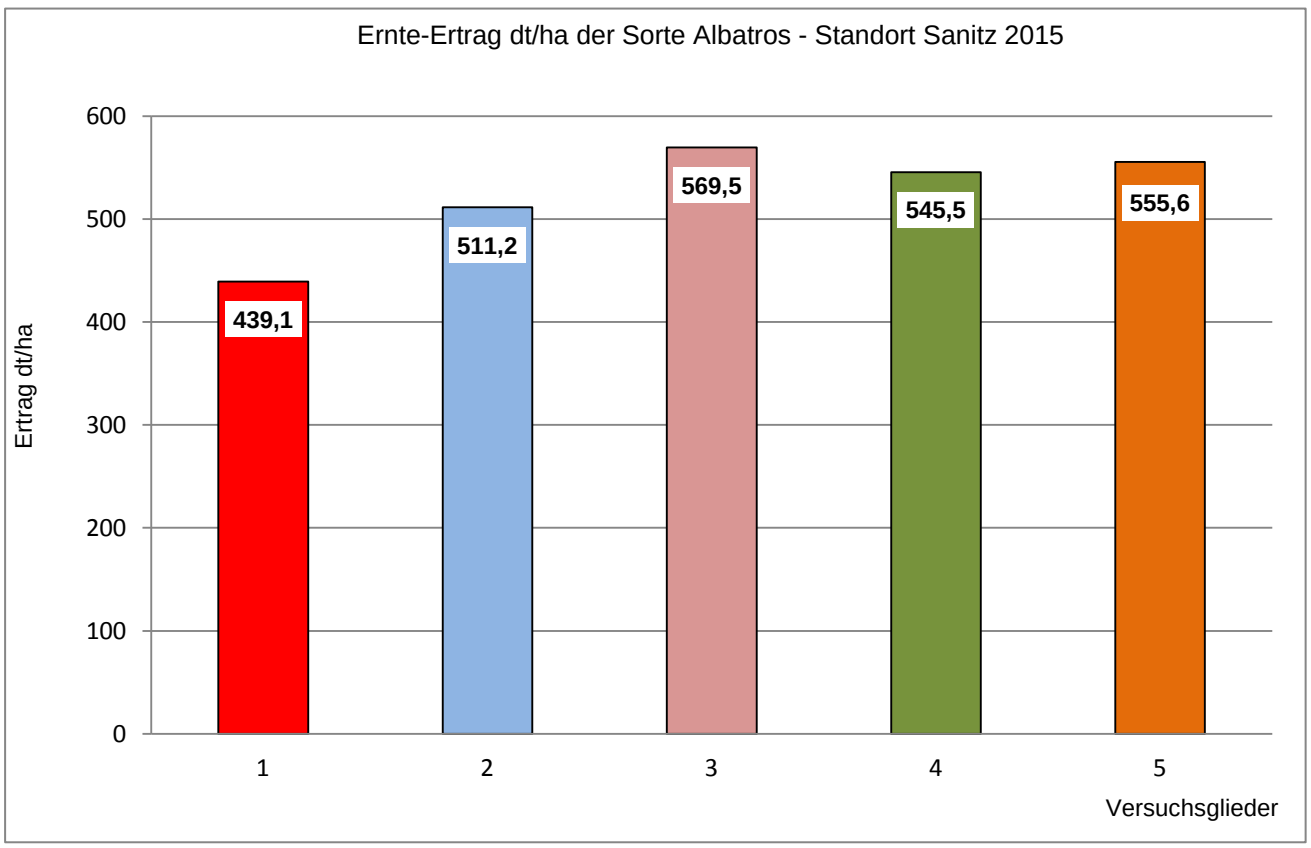
VGL		Ertrag		Fraktion - %			Braunfäule	Stärkegehalt		Stärkeertrag	
		dt / ha	relativ	< 35mm	35-55mm	> 55mm	%	%	relativ	dt/ha	relativ
1	Ø	**439,1**	**100,0**	**1,2**	**75,2**	**23,6**	0,0	**22,5**	**100,0**	**98,7**	**100,0**
2	Ø	**511,2**	**116,4**	**1,1**	**65,5**	**33,4**	**0,4**	**24,6**	**109,3**	**125,6**	**127,3**
3	Ø	**569,5**	**129,7**	**0,8**	**61,6**	**37,6**	**0,3**	**25,6**	**113,8**	**145,6**	**147,6**
4	Ø	**545,5**	**124,2**	**1,0**	**58,2**	**40,7**	0,0	**24,2**	**107,5**	**131,7**	**133,5**
5	Ø	**555,6**	**126,5**	**0,9**	**71,4**	**27,7**	0,0	**24,8**	**110,5**	**137,9**	**139,8**

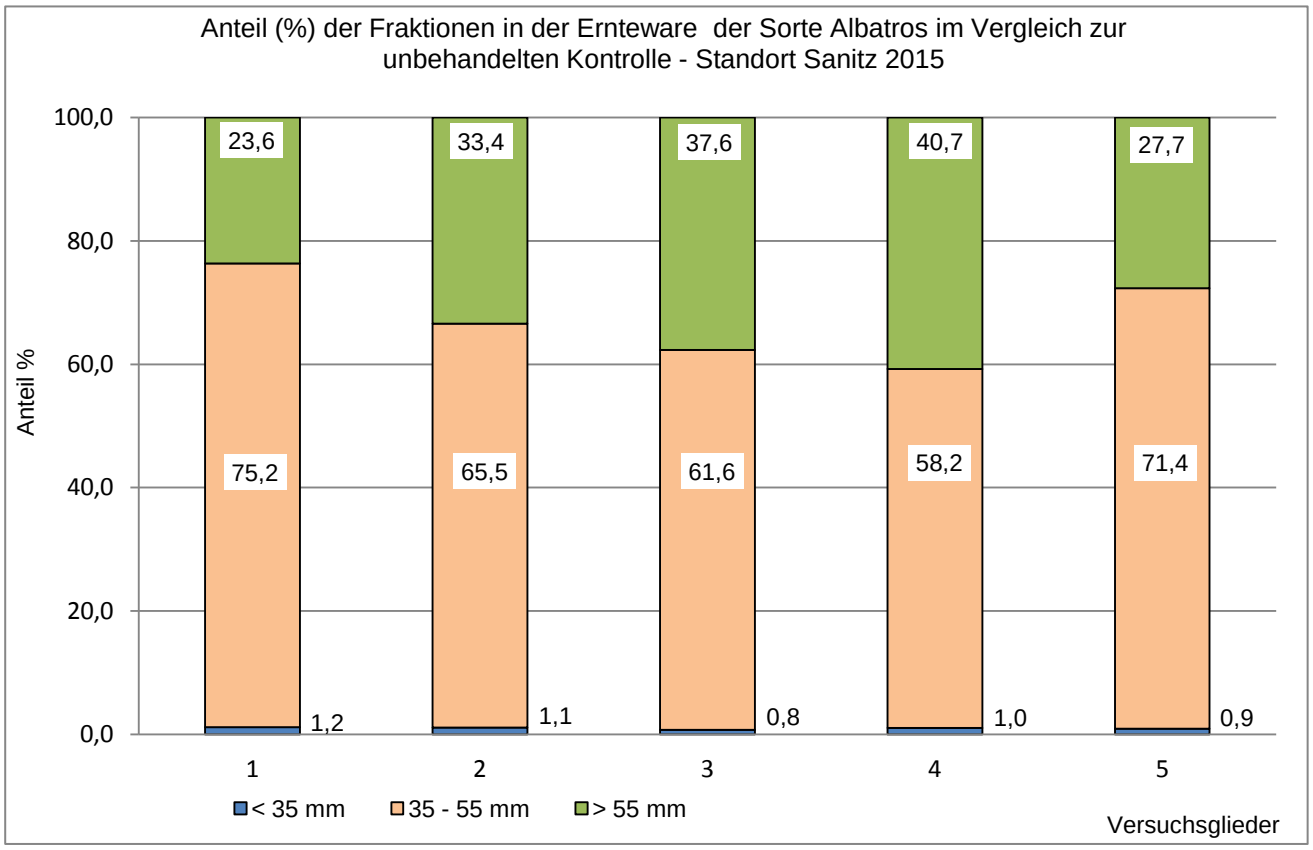
Bonitur: Ertrag, Fraktionierung, Braunfäule, Stärkegehalt

VGL	Wdh.	Ertrag		Fraktion - %			Braunfäule	Stärkegehalt	
		dt / ha	relativ	< 35mm	35-55mm	> 55mm	%	%	relativ
1	1	431,1		0,9	77,4	21,7	0,0	22,3	
	2	465,7		1,0	74,9	24,0	0,0	22,7	
	3	448,9		1,0	73,0	26,0	0,0	23,1	
	4	410,6		1,8	75,5	22,7	0,0	21,8	
	MW	**439,1**	**100,0**	**1,2**	**75,2**	23,6	0,0	**22,5**	**100,0**
2	1	518,1		1,1	63,6	35,3	0,0	24,5	
	2	523,7		1,1	74,9	24,0	0,0	25,1	
	3	487,1		1,0	61,5	37,5	0,0	24,5	
	4	516,1		1,3	61,8	36,9	1,4	24,2	
	MW	**511,2**	**116,4**	**1,1**	**65,5**	**33,4**	**0,4**	**24,6**	**109,3**
3	1	569,3		0,8	62,8	36,4	0,0	25,8	
	2	585,0		1,1	58,6	40,4	0,0	24,8	
	3	593,5		0,5	64,8	34,7	1,2	25,8	
	4	530,1		0,7	60,2	39,1	0,0	25,9	
	MW	**569,5**	**129,7**	**0,8**	**61,6**	**37,6**	**0,3**	**25,6**	**113,8**
4	1	524,5		1,2	61,9	36,8	0,0	24,7	
	2	595,5		1,1	62,9	36,0	0,0	24,0	
	3	527,1		0,9	55,5	43,6	0,0	23,6	
	4	534,7		0,9	52,5	46,6	0,0	24,3	
	MW	**545,5**	**124,2**	**1,0**	**58,2**	**40,7**	0,0	**24,2**	**107,5**
5	1	579,9		0,7	71,4	27,9	0,0	24,7	
	2	568,7		1,1	75,1	23,8	0,0	25,2	
	3	552,1		1,1	73,5	25,4	0,0	24,3	
	4	521,7		0,9	65,5	33,6	0,0	25,1	
	MW	**555,6**	**126,5**	**0,9**	**71,4**	**27,7**	0,0	**24,8**	**110,5**

Fungizidversuch Kartoffeln 2015

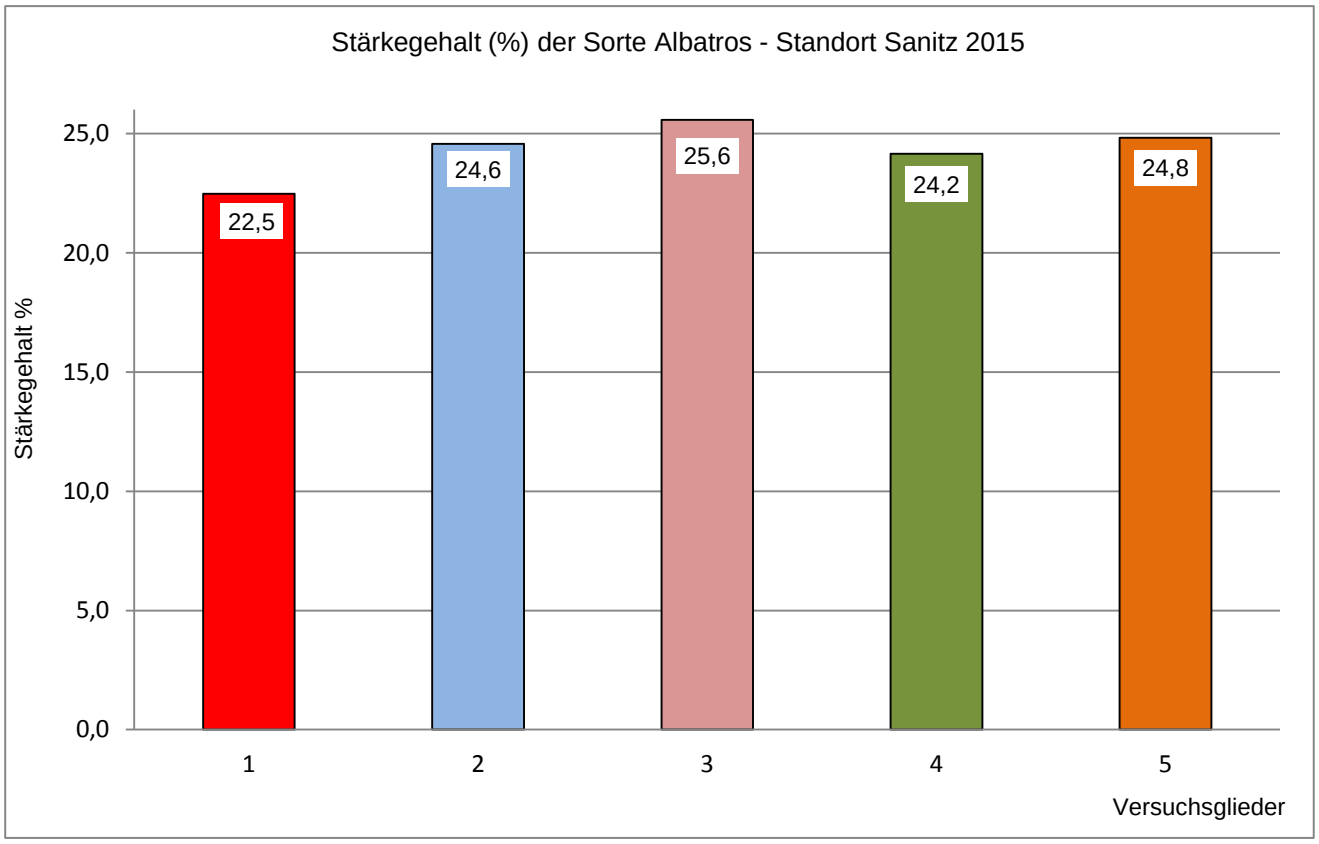
Grafik: Ertrag und Fraktionierung





Fungizidversuch Kartoffeln 2015

Grafik: Stärkegehalt



Fungizidversuch Kartoffeln 2015

Abschluss

Der Versuch wurde von agro nord im Jahr 2015 durchgeführt und mit dem beiliegendem Bericht am 10.11.2015 abgeschlossen.

Versuchsleiter
gez. Kürzinger

Stempel

Wetterdaten agro nord, Prüfstelle Groß Lüsewitz

Jahr / Monat 2015 / April
Meßstation 18190 Groß Lüsewitz
Lage über NN 40 m

Datum	Temperatur °C				Niederschlag	rel. Luftfeuchte
	min	max	mitt	Bodennähe	mm	%
1	1,9	6,4	4,0	3,9	4,8	87,7
2	0,0	6,9	3,9	3,9	2,8	83,5
3	2,0	7,7	4,7	4,6	0,0	83,7
4	-1,7	9,1	4,1	3,8	0,0	79,3
5	-1,4	9,4	4,9	4,8	0,1	67,4
6	-0,6	9,8	4,2	4,1	0,0	80,7
7	-1,6	10,2	4,7	4,2	0,0	89,5
8	1,9	11,2	7,3	7,0	0,0	91,8
9	0,7	14,5	7,0	6,3	0,2	85,7
10	0,0	18,4	10,1	9,7	0,0	77,1
11	6,8	20,8	13,1	12,9	1,1	72,9
12	4,5	13,2	9,1	9,1	0,0	66,1
13	4,9	12,0	7,7	7,7	0,0	68,4
14	-0,1	12,2	7,4	7,4	1,7	87,8
15	7,9	20,1	12,3	12,4	0,2	74,7
16	5,4	12,4	8,0	8,0	0,0	75,0
17	0,8	11,8	6,8	6,9	0,7	82,9
18	-1,0	10,9	5,4	5,3	0,1	69,4
19	1,9	14,8	7,9	7,9	0,0	76,5
20	2,8	15,6	9,9	10,0	0,0	69,9
21	0,8	14,7	9,6	9,4	0,0	71,6
22	1,6	14,6	8,7	8,5	0,0	77,3
23	2,1	15,6	8,7	8,5	0,0	87,3
24	4,4	17,2	10,2	10,1	0,0	85,6
25	3,9	16,8	11,1	10,5	1,3	86,8
26	7,0	16,8	11,7	11,8	0,7	89,6
27	5,9	9,9	7,7	7,8	6,8	85,6
28	3,6	10,9	7,5	7,7	0,0	68,9
29	1,1	14,3	8,5	8,4	0,0	63,2
30	6,1	14,0	9,3	9,1	2,3	74,2
Monat	**2,4**	**13,1**	**7,9**	**7,7**	**0,8**	**78,7**

Durchschnittliche Temperatur	7,9	°C
langjähriges Mittel (1973 - 2014)	12,0	°C
Abweichung zum Monatsmittel	-4,2	°C

Niederschlagssumme	22,8	mm
langjähriges Mittel (1973 - 2014)	54,0	mm
Abweichung zum Monatsmittel	-31,2	mm
relativ zum Monatsmittel	42,2	%

Wetterdaten agro nord, Prüfstelle Groß Lüsewitz

Jahr / Monat 2015 / Mai
Meßstation 18190 Groß Lüsewitz
Lage über NN 40 m

Datum	Temperatur °C				Niederschlag	rel. Luftfeuchte
	min	max	mitt	Bodennähe	mm	%
1	1,4	11,8	7,3	7,1	0,2	83,2
2	-1,0	12,5	6,7	6,5	0,0	79,5
3	0,1	16,6	9,8	9,9	5,4	69,2
4	9,8	19,0	14,5	14,4	7,3	82,7
5	10,9	21,2	15,2	15,1	17,1	90,4
6	6,2	19,1	12,9	12,5	0,0	73,7
7	6,1	14,5	10,4	10,1	0,3	82,3
8	3,1	17,2	10,7	10,6	0,0	74,0
9	8,0	17,2	11,9	11,7	5,1	86,3
10	2,9	13,7	9,5	9,3	2,3	81,7
11	1,5	19,4	11,8	11,3	0,0	67,1
12	5,7	24,0	14,0	13,5	3,6	76,3
13	5,5	15,5	10,9	10,9	0,0	73,0
14	7,2	13,8	10,2	10,2	0,1	86,2
15	3,7	13,9	9,1	8,9	0,0	81,9
16	2,2	11,4	7,9	7,7	0,3	91,1
17	5,3	14,0	9,9	9,9	0,0	69,7
18	5,1	14,3	10,7	10,8	0,9	80,1
19	5,0	16,1	11,3	11,2	1,6	83,0
20	2,4	16,2	9,7	9,2	1,0	80,3
21	1,8	15,2	9,4	8,8	0,1	78,8
22	0,7	18,9	11,4	10,8	0,0	76,5
23	3,7	14,1	10,8	10,7	0,9	85,2
24	2,6	19,3	11,0	10,9	0,0	75,7
25	4,3	16,4	10,5	10,2	0,0	87,9
26	4,4	14,7	10,6	10,5	0,2	73,0
27	5,9	14,7	10,4	10,3	0,0	74,7
28	5,4	17,9	10,7	10,6	6,6	83,3
29	4,1	16,9	11,4	11,4	0,0	67,8
30	5,4	15,2	10,5	10,5	4,1	81,4
31	4,4	17,4	12,5	12,4	0,0	68,6
Monat	**4,3**	**16,2**	**10,8**	**10,6**	**1,8**	**78,9**

Durchschnittliche Temperatur	10,8	°C
langjähriges Mittel (1973 - 2014)	12,0	°C
Abweichung zum Monatsmittel	-1,2	°C

Niederschlagssumme	57,1	mm
langjähriges Mittel (1973 - 2014)	54,0	mm
Abweichung zum Monatsmittel	3,1	mm
relativ zum Monatsmittel	105,7	%

Wetterdaten agro nord, Prüfstelle Groß Lüsewitz

Jahr / Monat 2015 / Juni
Meßstation 18190 Groß Lüsewitz
Lage über NN 40 m

Datum	Temperatur °C				Niederschlag	rel. Luftfeuchte
	min	max	mitt	Bodennähe	mm	%
1	9,4	16,4	13,5	13,4	1,9	67,4
2	9,3	19,6	15,6	15,5	0,0	70,6
3	8,0	18,8	15,4	15,3	0,0	66,9
4	5,6	17,9	12,7	12,8	0,0	63,2
5	6,1	25,3	16,8	16,6	0,0	60,2
6	6,0	25,7	17,3	17,0	0,0	72,9
7	3,8	20,4	12,8	12,5	0,0	68,6
8	5,6	15,8	11,8	11,9	0,0	73,5
9	7,5	18,5	13,4	13,6	0,0	68,6
10	5,0	20,9	13,8	13,7	0,0	62,2
11	3,5	19,1	13,1	12,8	0,0	75,8
12	5,6	24,9	16,7	16,7	0,0	67,0
13	9,6	28,4	19,5	19,5	4,1	77,1
14	10,9	17,5	14,4	14,3	0,0	83,9
15	7,6	15,5	11,8	12,0	0,0	64,9
16	5,1	14,6	11,4	11,4	0,0	68,9
17	4,1	18,6	12,2	12,1	2,1	78,0
18	9,7	16,6	12,8	12,8	7,5	92,0
19	9,3	15,9	11,9	11,9	6,9	87,2
20	10,8	17,4	13,6	13,8	14,9	86,1
21	10,6	18,0	13,3	13,3	0,0	79,6
22	10,5	16,7	13,0	13,0	16,0	88,2
23	8,4	17,6	13,6	13,8	0,2	79,9
24	10,9	14,8	12,8	12,8	0,1	83,8
25	10,7	20,3	15,1	15,1	0,0	82,0
26	9,6	21,0	15,9	16,0	0,6	74,8
27	14,1	21,7	17,1	17,0	15,7	89,1
28	12,7	20,3	15,8	15,8	3,9	78,6
29	13,4	23,7	17,7	17,7	1,7	78,9
30	11,2	20,3	16,7	16,7	0,0	75,8
Monat	**8,5**	**19,4**	**14,4**	**14,4**	**2,5**	**75,5**

Durchschnittliche Temperatur	14,4	°C
langjähriges Mittel (1973 - 2014)	14,9	°C
Abweichung zum Monatsmittel	-0,5	°C

Niederschlagssumme	75,6	mm
langjähriges Mittel (1973 - 2014)	73,0	mm
Abweichung zum Monatsmittel	2,6	mm
relativ zum Monatsmittel	103,6	%

Wetterdaten agro nord, Prüfstelle Groß Lüsewitz

Jahr / Monat 2015 / Juli
Meßstation 18190 Groß Lüsewitz
Lage über NN 40 m

Datum	Temperatur °C				Niederschlag	rel. Luftfeuchte
	min	max	mitt	Bodennähe	mm	%
1	8,6	24,7	18,1	18,1	0,0	69,0
2	14,5	26,5	20,7	20,9	0,0	65,6
3	15,9	30,6	23,3	23,1	0,0	64,5
4	15,0	32,9	25,7	25,5	0,0	63,5
5	17,4	31,9	24,7	24,6	15,3	74,8
6	12,1	22,1	18,7	18,6	0,0	72,6
7	10,6	28,0	19,6	19,5	3,2	72,9
8	13,8	20,1	16,8	16,8	0,6	83,1
9	10,9	16,6	13,6	13,6	0,6	71,8
10	7,0	17,1	13,3	13,3	0,1	66,9
11	4,8	19,9	13,5	13,3	0,0	66,8
12	9,9	21,8	15,8	15,7	4,2	85,6
13	14,4	20,2	16,7	16,8	0,3	83,0
14	12,7	21,8	16,8	16,8	0,1	81,1
15	12,5	20,3	16,5	16,6	0,0	71,0
16	9,1	21,3	16,0	16,1	0,1	77,1
17	6,5	25,6	17,7	17,7	0,0	73,3
18	10,1	23,9	17,7	17,4	5,4	77,6
19	6,7	15,0	11,9	11,6	8,8	95,5
20	9,8	21,1	15,3	15,0	0,0	78,9
21	11,1	24,8	18,4	18,1	0,3	77,0
22	10,1	26,4	19,5	19,3	0,0	70,0
23	10,6	20,4	16,5	16,5	0,0	74,7
24	6,9	24,4	16,7	16,6	0,0	64,4
25	12,7	27,2	18,7	18,8	7,2	75,9
26	10,1	19,8	15,0	14,8	13,9	75,1
27	11,5	19,3	14,9	14,9	1,2	86,8
28	12,7	19,5	15,7	15,6	1,0	91,7
29	11,6	18,9	14,2	14,2	0,9	80,8
30	12,0	15,9	13,4	13,3	6,5	93,4
31	8,1	17,4	13,5	13,4	0,1	71,7
Monat	**11,0**	**22,4**	**17,1**	**17,0**	**2,3**	**76,0**

Durchschnittliche Temperatur	17,1	°C
langjähriges Mittel (1973 - 2014)	16,9	°C
Abweichung zum Monatsmittel	0,2	°C

Niederschlagssumme	69,8	mm
langjähriges Mittel (1973 - 2014)	76,0	mm
Abweichung zum Monatsmittel	-6,2	mm
relativ zum Monatsmittel	91,8	%

Wetterdaten agro nord, Prüfstelle Groß Lüsewitz

Jahr / Monat 2015 / August
Meßstation 18190 Groß Lüsewitz
Lage über NN 40 m

Datum	Temperatur °C				Niederschlag	rel. Luftfeuchte
	min	max	mitt	Bodennähe	mm	%
1	4,4	21,9	13,8	13,7	0,0	71,2
2	9,8	24,0	16,9	16,7	0,0	72,8
3	7,0	28,6	19,0	18,9	0,0	63,8
4	16,2	31,6	22,5	22,5	10,7	71,0
5	15,1	24,5	19,1	19,1	0,6	70,5
6	13,6	30,2	21,4	21,5	0,0	72,8
7	14,6	26,9	21,3	21,1	0,0	72,7
8	15,5	25,0	19,4	19,4	0,0	86,2
9	9,6	22,4	16,8	16,6	0,0	67,6
10	9,1	29,4	19,2	19,2	0,0	66,6
11	15,8	23,5	19,1	19,1	9,0	95,0
12	12,5	21,0	17,5	17,3	0,0	91,3
13	10,6	24,4	18,2	18,2	0,0	72,1
14	16,7	28,1	21,7	21,8	0,0	69,2
15	17,9	26,3	21,3	21,2	0,8	84,4
16	17,1	25,2	20,3	20,4	0,0	88,5
17	18,2	24,9	20,5	20,4	0,3	72,8
18	12,7	25,8	20,0	19,9	0,0	68,4
19	11,4	26,5	19,2	19,1	0,0	56,1
20	7,1	25,3	17,8	17,7	0,0	57,9
21	9,2	27,1	18,9	18,6	0,0	53,5
22	8,8	27,4	18,7	18,5	0,0	62,0
23	14,9	24,9	19,0	19,0	0,0	69,5
24	15,7	24,8	18,9	18,8	10,5	80,1
25	12,7	21,7	17,1	16,9	13,0	87,2
26	13,3	24,3	18,6	18,4	0,3	76,0
27	14,1	21,3	17,5	17,3	14,6	85,9
28	12,4	21,0	16,0	15,9	1,2	84,0
29	9,4	23,3	16,5	16,1	0,0	74,1
30	10,8	23,1	17,3	17,0	4,8	83,7
31	15,8	27,2	20,9	20,8	0,0	81,9
Monat	**12,6**	**25,2**	**18,9**	**18,7**	**2,1**	**74,5**

Durchschnittliche Temperatur	18,9	°C
langjähriges Mittel (1973 - 2014)	16,9	°C
Abweichung zum Monatsmittel	2,0	°C

Niederschlagssumme	65,8	mm
langjähriges Mittel (1973 - 2014)	76,0	mm
Abweichung zum Monatsmittel	-10,2	mm
relativ zum Monatsmittel	86,6	%

Wetterdaten agro nord, Prüfstelle Groß Lüsewitz

Jahr / Monat 2015 / September
Meßstation 18190 Groß Lüsewitz
Lage über NN 40 m

Datum	Temperatur °C				Niederschlag	rel. Luftfeuchte
	min	max	mitt	Bodennähe	mm	%
1	13,4	24,1	18,9	18,7	0,4	87,7
2	8,8	20,2	14,7	14,4	0,0	77,6
3	6,8	17,1	12,0	11,4	1,0	89,6
4	6,0	18,9	12,8	12,7	0,0	77,2
5	11,1	16,8	13,3	13,2	11,5	85,2
6	11,6	16,9	13,9	13,8	9,0	80,6
7	8,6	18,3	13,5	13,4	0,0	67,7
8	6,2	17,9	11,8	11,4	0,0	84,0
9	3,4	18,6	11,5	11,1	0,0	77,6
10	5,8	19,7	13,7	13,4	0,0	80,0
11	12,3	16,9	13,8	13,7	11,8	91,2
12	12,2	19,6	15,6	15,6	2,5	89,3
13	13,4	19,4	16,1	16,1	1,2	91,9
14	14,4	20,1	16,7	16,5	4,6	90,4
15	11,1	18,5	14,2	13,9	1,2	81,9
16	9,3	17,9	14,5	14,1	1,3	89,1
17	14,2	20,4	17,1	16,8	1,4	85,0
18	8,7	18,9	14,0	13,6	0,0	83,8
19	9,2	19,5	13,3	13,0	0,9	91,8
20	9,3	16,4	12,8	12,7	1,4	89,0
21	11,1	15,9	12,9	12,7	2,0	89,9
22	12,0	15,7	13,3	13,2	1,1	91,1
23	7,6	15,3	11,8	11,2	0,0	95,9
24	6,8	17,3	12,0	11,4	0,1	87,1
25	5,5	18,9	12,9	12,5	0,0	83,1
26	4,6	16,5	10,8	10,3	0,0	83,9
27	2,6	16,8	9,9	9,3	0,0	84,3
28	1,4	17,6	9,7	9,2	0,0	81,3
29	3,5	17,1	9,7	9,1	0,0	84,2
30	1,0	18,5	9,0	8,4	0,0	84,7
Monat	8,4	18,2	13,2	12,9	1,7	85,2

Durchschnittliche Temperatur	13,2	°C
langjähriges Mittel (1973 - 2014)	16,8	°C
Abweichung zum Monatsmittel	-3,6	°C

Niederschlagssumme	51,4	mm
langjähriges Mittel (1973 - 2014)	72,0	mm
Abweichung zum Monatsmittel	-20,6	mm
relativ zum Monatsmittel	71,4	%

2015 Exakt-Versuche in der Kartoffel
Effizienznachweis bei Herbizid-/Fungizidanwendungen mit MulchCover MC-1000 und CropCover CC-1000
Versuchsdurchführung
Field Research Support

Bernhard Sack

18.01.2016

Versuchsstandort / Sorte

- Springe-Bockerode
- Innovator

Versuchsanlage

VGL	A 18.05.15	B 04.06.15	C 25.06.15	D 02.07.15	E 10.07.15	F 17.07.15	G 22.07.15	H 31.07.15	I 06.08.15	J 18.08.15	K 21.08.15	L 24.08.15	M 31.08.15	N 04.09.15
1	Kontrolle													
2	Boxer 4,0 Sencor 0,5	Gramin 1,25 Boxer 1,25	Ridomil Gold MZ 2,0	Shirlan 0,4		Revus Top 0,6		Valis M 2,5 Proxanil 2,0	Valis M 2,5 Proxanil 2,0	Valis M 2,5 Proxanil 2,0		Revus 0,6 Ortiva 0,5		Revus 0,6 Ortiva 0,5
3	Boxer 4,0 Sencor 0,5 MC-1000 6,0	Gramin 1,25 Boxer 1,25 MC-1000 6,0	Ridomil Gold MZ 2,0 CC-1000 2,0	Shirlan 0,4 CC-1000 2,0		Revus Top 0,6 CC-1000 2,0		Valis M 2,5 Proxanil 2,0 CC-1000 2,0	Valis M 2,5 Proxanil 2,0 CC-1000 2,0	Valis M 2,5 Proxanil 2,0 CC-1000 2,0		Revus 0,6 Ortiva 0,5 CC-1000 2,0		Revus 0,6 Ortiva 0,5 CC-1000 2,0
4	Boxer 4,0 Sencor 0,5 MC-1000 6,0	Gramin 1,25 Boxer 1,25 MC-1000 6,0	Ridomil Gold MZ 2,0 CC-1000 2,0		Shirlan 0,4 CC-1000 2,0		Revus Top 0,6 CC-1000 2,0		Valis M 2,5 Proxanil 2,0 CC-1000 2,0		Valis M 2,5 Proxanil 2,0 CC-1000 2,0		Revus 0,6 Ortiva 0,5 CC-1000 2,0	

Versuchsergebnis - Stärkeertrag

VGL	Ertrag		Stärkegehalt	
	t / ha	relativ	%	relativ
1	55,00	100,0	18,0	100,0
2	61,75	112,3	19,3	107,1
3	71,50 +9,75	130,0	19,2	106,5
4	72,97 +11,22	132,7	19,2	106,5

Versuchseinschätzung

- Signifikanter Mehrertrag in den CropCover behandelten Varianten bei gleichem Stärkegehalt
- bessere Wirkstoffverfügbarkeit durch verbesserte Haftung spielt eine äußerst wichtige Rolle
- unterschiedliche Spritzstrategien je nach Witterung wählbar
- Einsatz von CropCover CC-1000 wirtschaftlich sinnvoll

Vielen Dank für Ihre Aufmerksamkeit!

amynova polymers GmbH
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GF: Bernhard Sack

- Anlagen: Versuchsrohdaten

FIELD RESEARCH SUPPORT

FINAL REPORT

STUDY NO: FRS164/15

Field study to evaluate the efficacy of CropCover CC-1000 and MulchCover MC-1000 mixed with fungicides and herbicides to control fungal diseases and weeds and increase starch yield of potato in Germany.

Open Field Efficacy and Selectivity Study 2015

Testing Facility:

Field Research Support
Potts Kamp 8
D-31515 Wunstorf
Tel.: +49-5031-5166999
Fax: +49-5031-5166998

Test Facility Management:

Helmut Zöllner

Field Investigator:

Helmut Zöllner

Sponsor:

amynova polymers GmbH
ChemiePark Bitterfeld-Wolfen
Areal A, OT Wolfen
Kunstseidestraße 6
06766 Bitterfeld-Wolfen

Sponsor's Representative:

Bernhard Sack
Managing Director
bs@amynova.com
+49 (0) 3494 638342

Date of Report: 18.01.2016

CONTENTS

1. GEP-STATEMENT

GEP - Statement

This study was performed in accordance with the protocol agreed upon with the sponsor and the guidelines:

OEPP/EPPO, PP 1/2(4):
Guideline for the efficacy evaluation of fungicides; *Phytophthora infestans* on potato.

OEPP/EPPO, PP 1/51(3):
Guideline for the efficacy evaluation of herbicides; Weeds in potato.

OEPP/EPPO, PP 1/135 (4):
Guideline for the efficacy evaluation of plant protection products; Phytotoxicity Assessment.

OEPP/EPPO, PP 1/152(4):
Guideline for the efficacy evaluation of plant protection products; Design and Analysis of Efficacy Evaluation Trials.

OEPP/EPPO, PP 1/181(4):
Guideline for the efficacy evaluation of plant protection products; Conduct and reporting of efficacy evaluation trials including good experimental practice.

OEPP/EPPO, PP 1/263(1):
Guideline for the efficacy evaluation of fungicides; *Alternaria solani* and *Alternaria alternata* on potato & outdoor tomato production.

All results collected during this study have been mentioned in this report, with the exception of possible minor items which cannot be considered to have any impact on the validity of the data or on the interpretation of the results.

This study was performed at the testing facility: Field Research Support, Potts Kamp 8, 31515 Wunstorf, Germany.
The raw data are archived at the testing facility according to the Principles of Good Experimental Practice.

Wunstorf, the 18.01.2016

Helmut Zöllner

2. IDENTIFICATIONS

2.1. TIME SCHEDULE

Study No.	Beginning of field part	Completion of field part
FRS164/15	04.05.2015	07.10.2015

2.2. TEST- AND REFERENCE SUBSTANCES

Test Substance	Active ingredient	Formulation	Content a.i. (g/kg)	Batch-No.
CropCover CC-1000	modified high-amylose starch and wheat flour	XX	100	n/a
MulchCover MC-1000	modified high-amylose starch and wheat flour	XX	100	n/a

Reference Substance	Active ingredient	Formulation	Content a.i. (g/kg ; g/l)
Boxer	prosulfocarb	EC	800
Sencor WG	metribuzin	WG	700
Gramin	quizalofop-P	EC	46,3
Ridomil Gold MZ	mancozeb + metalaxyl-M	WG	640 38,8
Shirlan	fluazinam	SC	500
Revus Top	difenoconazole + mandipropamid	SC	250 250
Valis M	mancozeb + valifenalate	WG	600 60
Proxanil	cymoxanil + propamocarb	SC	50 334,62
Revus	mandipropamid	SC	250
Ortiva	azoxystrobin	SC	250

a.i. = active ingredient, n.a. = not applicable

3. APPLICATION AND TIMING OF APPLICATION

The applications were done with a boom sprayer.

	Herbicides	**Fungicides**
Number of applications	2	6 (treatment 4) 8 (treatments 2 + 3)
Timing of applications	A: pre-emergence B: early post-emergence	C-N: at risk appearance in 7-10 days interval (treatments 2-3) and 9-15 days interval (treatment 4)

Timing of applications:

Application No.	**Date**	**Treatments**	**BBCH Crop**	**Amount of water (l/ha)**
A	18.05.2015	2, 3, 4	08	200
B	04.06.2015	2, 3, 4	12	200
C	25.06.2015	2, 3, 4	57	200
D	02.07.2015	2,3	61	400
E	10.07.2015	4	69	400
F	17.07.2015	2,3	71	400
G	22.07.2015	4	71-72	400
H	31.07.2015	2,3	71-75	400
I	06.08.2015	2,3,4	71-75	400
J	18.08.2015	2,3	85-89	400
K	21.08.2015	4	85-89	400
L	24.08.2015	2,3	85-89	400
M	31.08.2015	4	85-89	400
N	04.09.2015	2,3	87-89	400

Dosages:

Treatment No.	Test Substance	Application Rate a.i. g/ha	Application Rate FP kg/ha; l/ha	Application timing
1	Untreated Check	-	-	-
2	Boxer	3200	4,0	A
	Sencor	350	0,5	A
	Gramin	57,875	1,25	B
	Boxer	1000	1,25	B
	Ridomil Gold MZ	1357,6	2,0	C
	Shirlan	200	0,4	D
	Revus Top	300	0,6	F
	Valis M	1650	2,5	H I J N
	Proxanil	769,24	2,0	H I J N
	Revus	150	0,6	L
	Ortiva	125	0,5	L
3	Boxer	3200	4,0	A
	Sencor	350	0,5	A
	Gramin	57,875	1,25	B
	Boxer	1000	1,25	B
	Ridomil Gold MZ	1357,6	2,0	C
	Shirlan	200	0,4	D
	Revus Top	300	0,6	F
	Valis M	1650	2,5	H I J N
	Proxanil	769,24	2,0	H I J N
	Revus	150	0,6	L
	Ortiva	125	0,5	L
	MulchCover MC-1000	600	6,0	A B
	CropCover CC-1000	200	2,0	C D E F G H I J L N
4	Boxer	3200	4,0	A
	Sencor	350	0,5	A
	Gramin	57,875	1,25	B
	Boxer	1000	1,25	B
	Ridomil Gold MZ	1357,6	2,0	C
	Shirlan	200	0,4	E
	Revus Top	300	0,6	G
	Valis M	1650	2,5	I K
	Proxanil	769,24	2,0	I K
	Revus	150	0,6	M
	Ortiva	125	0,5	M
	MulchCover MC-1000	600	6,0	A B
	CropCover CC-1000	200	2,0	C D E F G H I K M

a.i. = active ingredient, FP = formulated product

4. ASSESSMENTS

4.1. EFFICACY

Herbicides:

1. preliminary assessment: at application A.
2. assessment: at application B/ BBCH 10 of the crop/ 2 weeks after first assessment.
3. assessment: at BBCH 14-14 of the weeds.
4. assessment: up to 3 weeks after application B
5. assessment: 3-6 weeks after application B
6. assessment: when the potato rows close (BBCH 39)
7. assessment: shortly before harvest or haulm-killing

Fungicides:

First assessment at first disease appearance in the trial.
Following assessments before each further application.
Last assessment 7 -14 days after last application.

Harvest: record TOTAL weight of tubers in kg/plot, weight of ROTTEN tubers in kg/plot, weight of each size class after grading (according to national standards), malformed tubers, Starch content (%)

4.2. SELECTIVITY

Any unintended effects on the crop, such as spots, chlorosis, necrosis, abnormal development on an appropriate scale were noted.

5. TRIAL DATA

5.1. CROP AND FIELD MAINTENANCE

Crop Data		**Prior Crop**	
Crop	Potato	2014	Winter wheat
Variety	Innovator	2013	Maize
Planting Date	25.04.2015	Emergence Date	20.05.2015
Planting Density	2200 kg/ha		

Pest Management	
30.06.2015	Biscaya 0.3 L/ha (insecticide)
Soil Maintenance	
25.04.2015	Planting
Fertilizing	
11.08.2014	Digestate 11m³/ha (5,83 kg N/m3)
18.03.2015	Kornkali 40/6 500 kg/ha
23.03.2015	Urea 46%N 270 kg/ha
12.06.2015	Urea 46%N 141 kg/ha

5.2. SOIL CHARACTERIZATION

pH	**Organic matter (org. C, %)**	**Soil type**
6,68	1,1	Silt loam

5.3. TRIAL LOCATION AND DESIGN

The trial was located in a region typical for potato production in Northern Germany.

Address of the farmer: F. Henkels, Rittergut Bockerode, 31832 Springe-Bockerode, Lower Saxony, Germany.
GPS location: 52,18254° N; 9,67451° E

The trial was realised as a randomised complete block. Four treatments were set up in four replicates. The plot size was 18,0 m² = 3,0 m x 6,0 m.

6.3.1 Location of the trial

Source : Copyright Google Earth.

5.4. APPLICATION DATA

Application A

Date	18.05.2015	Cloud Cover (%)	90
Time	11:00	Wind (m/sec)	1,0
Air Temp. (°C)	17,0	Wind Direction	W
Soil Temp. (°C)	13,0	Leaf Condition	Dry
RH (%)	57	Soil Condition	Moist, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	200
Nozzle Type	AD 120-02	Crop Height (cm)	--
Pressure (bar)	2,3	Crop Stage (BBCH)	08
Next moisture occurred on	24.05.2015	Time to next moisture	6 days

Application B

Date	04.06.2015	Cloud Cover (%)	30
Time	12:00	Wind (m/sec)	0,5
Air Temp. (°C)	20,0	Wind Direction	SE
Soil Temp. (°C)	15,0	Leaf Condition	Dry
RH (%)	49	Soil Condition	Dry, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	200
Nozzle Type	AD 120-02	Crop Height (cm)	4-7
Pressure (bar)	2,4	Crop Stage (BBCH)	12
Next moisture occurred on	13.06.2015	Time to next moisture	9 days

Application C

Date	25.06.2015	Cloud Cover (%)	60
Time	10:30	Wind (m/sec)	1,0
Air Temp. (°C)	20,0	Wind Direction	W
Soil Temp. (°C)	14,0	Leaf Condition	Dry
RH (%)	63	Soil Condition	Moist, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	200
Nozzle Type	AD 120-02	Crop Height (cm)	30
Pressure (bar)	2,5	Crop Stage (BBCH)	57
Next moisture occurred on	26.06.2015	Time to next moisture	1 day

Application D

Date	02.07.2015	Cloud Cover (%)	0
Time	10:00	Wind (m/sec)	0,5
Air Temp. (°C)	24,0	Wind Direction	W
Soil Temp. (°C)	19,0	Leaf Condition	Dry
RH (%)	40	Soil Condition	Dry, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	400
Nozzle Type	AD 120-04	Crop Height (cm)	40
Pressure (bar)	2,4	Crop Stage (BBCH)	61
Next moisture occurred on	03.07.2015	Time to next moisture	1 day

Application E

Date	10.07.2015	Cloud Cover (%)	50
Time	10:50	Wind (m/sec)	0,5
Air Temp. (°C)	19,1	Wind Direction	E
Soil Temp. (°C)	15,2	Leaf Condition	Dry
RH (%)	48	Soil Condition	Moist, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	400
Nozzle Type	IDK120-04	Crop Height (cm)	50-60
Pressure (bar)	2,4	Crop Stage (BBCH)	69
Next moisture occurred on	12.07.2015	Time to next moisture	2 days

Application F

Date	17.07.2015	Cloud Cover (%)	50
Time	13:00	Wind (m/sec)	1,0
Air Temp. (°C)	22,0	Wind Direction	NW
Soil Temp. (°C)	17,0	Leaf Condition	Dry
RH (%)	48	Soil Condition	Moist, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	400
Nozzle Type	AD 120-04	Crop Height (cm)	50-60
Pressure (bar)	2,4	Crop Stage (BBCH)	71
Next moisture occurred on	18.07.2015	Time to next moisture	1 day

Application G

Date	22.07.2015	Cloud Cover (%)	50
Time	14:00	Wind (m/sec)	1,0
Air Temp. (°C)	23,0	Wind Direction	NW
Soil Temp. (°C)	18,0	Leaf Condition	Dry
RH (%)	55	Soil Condition	Moist, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	400
Nozzle Type	AD 120-04	Crop Height (cm)	50-60
Pressure (bar)	2,4	Crop Stage (BBCH)	71-72
Next moisture occurred on	24.07.2015	Time to next moisture	2 days

Application H

Date	31.07.2015	Cloud Cover (%)	30
Time	11:00	Wind (m/sec)	1,5
Air Temp. (°C)	17,0	Wind Direction	NW
Soil Temp. (°C)	15,0	Leaf Condition	Dry
RH (%)	50	Soil Condition	Moist, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	400
Nozzle Type	IDK120-02	Crop Height (cm)	50-60
Pressure (bar)	1,9	Crop Stage (BBCH)	71-75
Next moisture occurred on	04.08.2015	Time to next moisture	4 days

Application I

Date	06.08.2015	Cloud Cover (%)	100
Time	10:00	Wind (m/sec)	0,5
Air Temp. (°C)	26,0	Wind Direction	SW
Soil Temp. (°C)	20,0	Leaf Condition	Dry
RH (%)	51	Soil Condition	Moist, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	400
Nozzle Type	IDK120-02	Crop Height (cm)	50-60
Pressure (bar)	1,9	Crop Stage (BBCH)	71-75
Next moisture occurred on	07.08.2015	Time to next moisture	1 day

Application J

Date	18.08.2015	Cloud Cover (%)	60
Time	11:00	Wind (m/sec)	0
Air Temp. (°C)	20,0	Wind Direction	--
Soil Temp. (°C)	16,3	Leaf Condition	Dry
RH (%)	62	Soil Condition	Moist, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	400
Nozzle Type	IDK120-04	Crop Height (cm)	25-50
Pressure (bar)	2,7	Crop Stage (BBCH)	85-89
Next moisture occurred on	23.08.2015	Time to next moisture	5 days

Application K

Date	21.08.2015	Cloud Cover (%)	10
Time	13:20	Wind (m/sec)	0
Air Temp. (°C)	27,5	Wind Direction	--
Soil Temp. (°C)	22,8	Leaf Condition	Dry
RH (%)	40	Soil Condition	Dry, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	400
Nozzle Type	IDK120-04	Crop Height (cm)	25-50
Pressure (bar)	2,7	Crop Stage (BBCH)	85-89
Next moisture occurred on	23.08.2015	Time to next moisture	2 days

Application L

Date	24.08.2015	Cloud Cover (%)	90
Time	14:50	Wind (m/sec)	0,5
Air Temp. (°C)	27,0	Wind Direction	SW
Soil Temp. (°C)	24,0	Leaf Condition	Dry
RH (%)	43	Soil Condition	Dry, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	400
Nozzle Type	IDK120-02	Crop Height (cm)	25-45
Pressure (bar)	2,7	Crop Stage (BBCH)	85-89
Next moisture occurred on	25.08.2015	Time to next moisture	1 day

Application M

Date	31.08.2015	Cloud Cover (%)	10
Time	13:00	Wind (m/sec)	0,1
Air Temp. (°C)	32,0	Wind Direction	SE
Soil Temp. (°C)	23,0	Leaf Condition	Dry
RH (%)	46	Soil Condition	Dry, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	400
Nozzle Type	IDK120-02	Crop Height (cm)	25-40
Pressure (bar)	1,9	Crop Stage (BBCH)	85-89
Next moisture occurred on	01.09.2015	Time to next moisture	1 day

Application N

Date	04.09.2015	Cloud Cover (%)	40
Time	11:50	Wind (m/sec)	1,5
Air Temp. (°C)	17,0	Wind Direction	SW
Soil Temp. (°C)	16,0	Leaf Condition	Dry
RH (%)	48	Soil Condition	Moist, crumbly
Application Equipment	Boom Sprayer	Water Volume (l/ha)	400
Nozzle Type	IDK120-04	Crop Height (cm)	15-40
Pressure (bar)	2,5	Crop Stage (BBCH)	87-89
Next moisture occurred on	05.09.2015	Time to next moisture	1 day

5.5. ASSESSMENTS

Date	Assessment Type	Crop growth stage (BBCH)
04.06.2015	17 DA-A: % phytotoxicity, vigour, % weed control	12
18.06.2015	31 DA-A: % phytotoxicity, vigour, % weed control	39
22.07.2015	27 DA-C: % phytotoxicity, % pest severity, % pest incidence	71-72
31.07.2015	36 DA-C: % phytotoxicity, % pest severity, % pest incidence	71-75
06.08.2015	42 DA-C: % phytotoxicity, % pest severity, % pest incidence	71-75
18.08.2015	54 DA-C: % phytotoxicity, % pest severity, % pest incidence	85-89
24.08.2015	60 DA-C: % phytotoxicity, % pest severity, % pest incidence	85-89
31.08.2015	67 DA-C: % phytotoxicity, % pest severity, % pest incidence	85-89
04.09.2015	71 DA-C: % phytotoxicity, % pest severity, % pest incidence	87-89
11.09.2015	78 DA-C: % phytotoxicity, % pest severity, % pest incidence	89
16.09.2015	83 DA-C: % phytotoxicity, % pest severity, % pest incidence	91-95
07.10.2015	104 DA-C: Harvest; yield, grading, starch content	89-99

DA-A: Days after application A (first herbicide application);
DA-C: Days after application C (first fungicide application)

Notes:

May-18-2015	Zöllner	No weeds present at first herbicide application.
Jun-25-2015	Zöllner	No PHYTIN symptoms visible yet.
Jul-2-2015	Zöllner	No PHYTIN symptoms visible yet.
Jul-10-2015	Zöllner	No PHYTIN symptoms visible yet.
Aug-24-2015	Weiß	Control plots visible from a distance due to Alternaria infestation.
Sep-4-2015	Weiß	Plants desiccated, drought symptoms, high amount of leaf biomass lost.
Sep-11-2015	Weiß	Not possible to distinguish between PHYTIN and ALTESO in control plots, strong senescence of crop
Sep-16-2015	Weiß	Plants in control plots dead.

5.5.1 Data Analysis / Statistics

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Yates=36,37,38,39;
Average=41,42,43,44

5.5.2 Abbreviations

Pest Type
W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop
D, Disease, G-BYRD7, G-DisStg = Disease, such as a fungus, bacteria, or virus
Pest Code
CHEAL, Chenopodium album
POLCO, Fallopia convolvulus
PHYTIN, Phytophthora infestans
ALTESO, Alternaria solani
Crop Code
SOLTU, BPOT, Solanum tuberosum
Part Rated
PLANT = plant
TUBER = tuber
TUGR1 = tuber - grade 1
TUGR2 = tuber - grade 2
TUGR3 = tuber - grade 3
C = Crop is Part Rated
P = Pest is Part Rated
Rating Type
PHYGEN = phytotoxicity - general / injury
VIGOR = vigor
YIELD = yield
STACON = starch content
CONTRO = control / burndown or knockdown
PESINC = pest incidence
PESSEV = pest severity
Rating Unit
% = percent
1-10 = 1-10 index/scale
kg = kilogram
T-MET = ton (metric=1000 kg)
%UNCK = percent of untreated check
PLOT = total plot
m2 = square meter
ha = hectare
Crop Stage Majority
12 = 2nd leaf of main stem unfolded (>4 cm)
39 = Crop cover complete
71 = 10% of berries in the first fructification have reached full size (main stem)
73 = 30% of berries in the first fructification have reached full size (main stem)

75 = 50% of berries in the first fructification have reached full size (main stem)
85 = Berries in the first fructification ochre-coloured or brownish
89 = Berries in the first fructification shrivelled, seed dark
91 = Beginning of leaf yellowing
99 = Harvested product

Crop Stage Minimum/Maximum

12 = 2nd leaf of main stem unfolded (>4 cm)
39 = Crop cover complete
71 = 10% of berries in the first fructification have reached full size (main stem)
85 = Berries in the first fructification ochre-coloured or brownish
89 = Berries in the first fructification shrivelled, seed dark
91 = Beginning of leaf yellowing
99 = Harvested product
72 = 20% of berries in the first fructification have reached full size (main stem)
75 = 50% of berries in the first fructification have reached full size (main stem)
95 = 50% of the leaves brownish

Crop Stage Scale

BBCH = BBCH uniform plant stages
PERCENT = 0-100 index/scale

Pest Stage Majority

11 = First true leaf, leaf pair or whorl unfolded; P_First leaves unfolded
63 = 30% of flowers open
55 = First individual flowers visible (still closed); G_Half of inflorescence emerged (middle of heading)

Pest Stage Minimum/Maximum

11 = First true leaf, leaf pair or whorl unfolded; P_First leaves unfolded
55 = First individual flowers visible (still closed); G_Half of inflorescence emerged (middle of heading)
12 = 2 true leaves, leaf pairs or whorls unfolded
65 = Full flowering: 50% of flowers open, first petals may be fallen
59 = First flower petals visible (in petalled forms; G_Inflorescence fully emerged (end of heading)
PLA/m2 = plants per square meter

Plant-Eval Interval

40 DP-1 = 1 SOLTU Apr-25-2015
54 DP-1 = 1 SOLTU Apr-25-2015
88 DP-1 = 1 SOLTU Apr-25-2015
97 DP-1 = 1 SOLTU Apr-25-2015
103 DP-1 = 1 SOLTU Apr-25-2015
115 DP-1 = 1 SOLTU Apr-25-2015
121 DP-1 = 1 SOLTU Apr-25-2015
128 DP-1 = 1 SOLTU Apr-25-2015
132 DP-1 = 1 SOLTU Apr-25-2015
139 DP-1 = 1 SOLTU Apr-25-2015
144 DP-1 = 1 SOLTU Apr-25-2015
165 DP-1 = 1 SOLTU Apr-25-2015

ARM Action Codes

APoC = Automatic percent control (Control forced to 100% on AOV Means Table)
AA = Automatic arcsine square root % transformation
EC = Do not analyze untreated check, while still reporting treatment mean on AOV Means Table
APC = Automatic percent control (Control forced to 0% on AOV Means Table)
AS = Automatic square root transformation of X+0.5
AL = Automatic log transformation of X+1
TY1 = 2.222222*(46)

5.5.3 Assessment Data (AOV Mean Table)

Crop phytotoxicity and vigour

Crop Code					SOLTU		SOLTU		SOLTU	
BBCH Scale					BPOT		BPOT		BPOT	
Crop Scientific Name					Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name					Potato		Potato		Potato	
Crop Variety					Innovator		Innovator		Innovator	
Description										
Part Rated					PLANT C		PLANT C		PLANT C	
Rating Date					Jun-4-2015		Jun-4-2015		Jun-18-2015	
Rating Type					PHYGEN		VIGOR		PHYGEN	
Rating Unit					%		1-10		%	
Sample Size, Unit					1 PLOT		1 PLOT		1 PLOT	
Collection Basis, Unit					1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples					1		1		1	
Crop Stage Majority					12		12		39	
Crop Stage Minimum/Maximum					12 12		12 12		39 39	
Crop Stage Scale					BBCH		BBCH		BBCH	
Crop Density, Unit					10 PERCENT		10 PERCENT		95 PERCENT	
Pest Stage Majority										
Pest Stage Minimum/Maximum										
Pest Density, Unit										
Assessed By					Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.					17 17		17 17		31 14	
Trt-Eval Interval					17 DA-A		17 DA-A		31 DA-A	
Plant-Eval Interval					40 DP-1		40 DP-1		54 DP-1	
Days After Emergence					14 DE-1		14 DE-1		28 DE-1	
Untreated Rating Type										
ARM Action Codes										
Sort Order for View					1		1		1	
Number of Decimals										
Trt No.	Treatment Name	Rate	Unit	Appl Code	3	StDev	4	StDev	7	StDev
1	Untreated check				0,0a	0,0	10,0a	0,0	0,0a	0,0
2	Farm-specific herbicide			A B	0,0a	0,0	10,0a	0,0	0,0a	0,0
	Farm-specific fungicide			C D F H I J L N						
3	Farm-specific herbicide			A B	0,0a	0,0	10,0a	0,0	0,0a	0,0
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	0,0a	0,0	10,0a	0,0	0,0a	0,0
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						0,00		0,00		0,00
Standard Deviation						0,00		0,00		0,00
CV						0,0		0,0		0,0
Bartlett's X2						0,0		0,0		0,0
P(Bartlett's X2)						.		.		.
Replicate F						0,000		0,000		0,000
Replicate Prob(F)						1,0000		1,0000		1,0000
Treatment F						0,000		0,000		0,000
Treatment Prob(F)						1,0000		1,0000		1,0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Crop Code					SOLTU		SOLTU		SOLTU	
BBCH Scale					BPOT		BPOT		BPOT	
Crop Scientific Name					Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name					Potato		Potato		Potato	
Crop Variety					Innovator		Innovator		Innovator	
Description										
Part Rated					PLANT C		PLANT C		PLANT C	
Rating Date					Jun-18-2015		Jul-22-2015		Jul-31-2015	
Rating Type					VIGOR		PHYGEN		PHYGEN	
Rating Unit					1-10		%		%	
Sample Size, Unit					1 PLOT		1 PLOT		1 PLOT	
Collection Basis, Unit					1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples					1		1		1	
Crop Stage Majority					39		71		73	
Crop Stage Minimum/Maximum					39 39		71 72		71 75	
Crop Stage Scale					BBCH		BBCH		BBCH	
Crop Density, Unit					95 PERCENT		100 PERCENT		100 PERCENT	
Pest Stage Majority										
Pest Stage Minimum/Maximum										
Pest Density, Unit										
Assessed By					Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.					31 14		65 5		74 9	
Trt-Eval Interval					31 DA-A		27 DA-C		36 DA-C	
Plant-Eval Interval					54 DP-1		88 DP-1		97 DP-1	
Days After Emergence					28 DE-1		62 DE-1		71 DE-1	
Untreated Rating Type										
ARM Action Codes										
Sort Order for View					1		1		1	
Number of Decimals										
Trt No.	Treatment Name	Rate	Unit	Appl Code	8	StDev	11	StDev	14	StDev
1	Untreated check				10,0a	0,0	0,0a	0,0	0,0a	0,0
2	Farm-specific herbicide			A B	10,0a	0,0	0,0a	0,0	0,0a	0,0
	Farm-specific fungicide			C D F H I J L N						
3	Farm-specific herbicide			A B	10,0a	0,0	0,0a	0,0	0,0a	0,0
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	10,0a	0,0	0,0a	0,0	0,0a	0,0
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						0,00		0,00		0,00
Standard Deviation						0,00		0,00		0,00
CV						0,0		0,0		0,0
Bartlett's X2						0,0		0,0		0,0
P(Bartlett's X2)						.		.		.
Replicate F						0,000		0,000		0,000
Replicate Prob(F)						1,0000		1,0000		1,0000
Treatment F						0,000		0,000		0,000
Treatment Prob(F)						1,0000		1,0000		1,0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
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Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Crop Code					SOLTU		SOLTU		SOLTU	
BBCH Scale					BPOT		BPOT		BPOT	
Crop Scientific Name					Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name					Potato		Potato		Potato	
Crop Variety					Innovator		Innovator		Innovator	
Description										
Part Rated					PLANT C		PLANT C		PLANT C	
Rating Date					Aug-6-2015		Aug-18-2015		Aug-24-2015	
Rating Type					PHYGEN		PHYGEN		PHYGEN	
Rating Unit					%		%		%	
Sample Size, Unit					1 PLOT		1 PLOT		1 PLOT	
Collection Basis, Unit					1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples					1		1		1	
Crop Stage Majority					75		85		87	
Crop Stage Minimum/Maximum					71 75		85 89		85 89	
Crop Stage Scale					BBCH		BBCH		BBCH	
Crop Density, Unit					100 PERCENT		95 PERCENT		75 PERCENT	
Pest Stage Majority										
Pest Stage Minimum/Maximum										
Pest Density, Unit										
Assessed By					Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.					80 6		92 12		98 3	
Trt-Eval Interval					42 DA-C		54 DA-C		60 DA-C	
Plant-Eval Interval					103 DP-1		115 DP-1		121 DP-1	
Days After Emergence					77 DE-1		89 DE-1		95 DE-1	
Untreated Rating Type										
ARM Action Codes										
Sort Order for View					1		1		1	
Number of Decimals										
Trt No.	Treatment Name	Rate	Unit	Appl Code	17	StDev	20	StDev	25	StDev
1	Untreated check				0,0a	0,0	0,0a	0,0	0,0a	0,0
2	Farm-specific herbicide			A B	0,0a	0,0	0,0a	0,0	0,0a	0,0
	Farm-specific fungicide			C D F H I J L N						
3	Farm-specific herbicide			A B	0,0a	0,0	0,0a	0,0	0,0a	0,0
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	0,0a	0,0	0,0a	0,0	0,0a	0,0
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						0,00		0,00		0,00
Standard Deviation						0,00		0,00		0,00
CV						0,0		0,0		0,0
Bartlett's X2						0,0		0,0		0,0
P(Bartlett's X2)						.		.		.
Replicate F						0,000		0,000		0,000
Replicate Prob(F)						1,0000		1,0000		1,0000
Treatment F						0,000		0,000		0,000
Treatment Prob(F)						1,0000		1,0000		1,0000

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Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Crop Code				SOLTU		SOLTU		SOLTU	
BBCH Scale				BPOT		BPOT		BPOT	
Crop Scientific Name				Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name				Potato		Potato		Potato	
Crop Variety				Innovator		Innovator		Innovator	
Description									
Part Rated				PLANT C		PLANT C		PLANT C	
Rating Date				Aug-31-2015		Sep-4-2015		Sep-11-2015	
Rating Type				PHYGEN		PHYGEN		PHYGEN	
Rating Unit				%		%		%	
Sample Size, Unit				1 PLOT		1 PLOT		1 PLOT	
Collection Basis, Unit				1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples				1		1		1	
Crop Stage Majority				87		89		89	
Crop Stage Minimum/Maximum				85 89		87 89		89 89	
Crop Stage Scale				BBCH		BBCH		BBCH	
Crop Density, Unit				75 PERCENT		60 PERCENT		40 PERCENT	
Pest Stage Majority									
Pest Stage Minimum/Maximum									
Pest Density, Unit									
Assessed By				Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.				105 7		109 4		116 7	
Trt-Eval Interval				67 DA-C		71 DA-C		78 DA-C	
Plant-Eval Interval				128 DP-1		132 DP-1		139 DP-1	
Days After Emergence				102 DE-1		106 DE-1		113 DE-1	
Untreated Rating Type									
ARM Action Codes									
Sort Order for View				1		1		1	
Number of Decimals									
Trt No.	Treatment Name	Rate	Unit	Appl Code	30	StDev	35	StDev	40	StDev
1	Untreated check				0,0a	0,0	0,0a	0,0	0,0a	0,0
2	Farm-specific herbicide			A B	0,0a	0,0	0,0a	0,0	0,0a	0,0
	Farm-specific fungicide			C D F H I J L N						
3	Farm-specific herbicide			A B	0,0a	0,0	0,0a	0,0	0,0a	0,0
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	0,0a	0,0	0,0a	0,0	0,0a	0,0
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						0,00		0,00		0,00
Standard Deviation						0,00		0,00		0,00
CV						0,0		0,0		0,0
Bartlett's X2						0,0		0,0		0,0
P(Bartlett's X2)						.		.		.
Replicate F						0,000		0,000		0,000
Replicate Prob(F)						1,0000		1,0000		1,0000
Treatment F						0,000		0,000		0,000
Treatment Prob(F)						1,0000		1,0000		1,0000

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Crop Code					SOLTU	
BBCH Scale					BPOT	
Crop Scientific Name					Solanum tubero>	
Crop Name					Potato	
Crop Variety					Innovator	
Description						
Part Rated					PLANT C	
Rating Date					Sep-16-2015	
Rating Type					PHYGEN	
Rating Unit					%	
Sample Size, Unit					1 PLOT	
Collection Basis, Unit					1 PLOT	
Number of Subsamples					1	
Crop Stage Majority					91	
Crop Stage Minimum/Maximum					91 95	
Crop Stage Scale					BBCH	
Crop Density, Unit					30 PERCENT	
Pest Stage Majority						
Pest Stage Minimum/Maximum						
Pest Density, Unit						
Assessed By					Zöllner	
Days After First/Last Applic.					121 12	
Trt-Eval Interval					83 DA-C	
Plant-Eval Interval					144 DP-1	
Days After Emergence					118 DE-1	
Untreated Rating Type						
ARM Action Codes						
Sort Order for View					1	
Number of Decimals						
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	45	StDev
1	Untreated check				0,0a	0,0
2	Farm-specific herbicide			A B	0,0a	0,0
	Farm-specific fungicide			C D F H I J L N		
3	Farm-specific herbicide			A B	0,0a	0,0
	MulchCover	6,0	l/ha	A B		
	Farm-specific fungicide			C D F H I J L N		
	CropCover	2,0	l/ha	C D F H I J L N		
4	Farm-specific herbicide			A B	0,0a	0,0
	MulchCover	6,0	l/ha	A B		
	Farm-specific fungicide			C E G I K M		
	CropCover	2,0	l/ha	C E G I K M		
LSD P=.05					0,00	
Standard Deviation					0,00	
CV					0,0	
Bartlett's X2					0,0	
P(Bartlett's X2)					.	
Replicate F					0,000	
Replicate Prob(F)					1,0000	
Treatment F					0,000	
Treatment Prob(F)					1,0000	

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Harvest yield

Crop Code						SOLTU		SOLTU		SOLTU
BBCH Scale						BPOT		BPOT		BPOT
Crop Scientific Name						Solanum tubero>		Solanum tubero>		Solanum tubero>
Crop Name						Potato		Potato		Potato
Crop Variety						Innovator		Innovator		Innovator
Description										< 35 mm
Part Rated						TUBER C		TUBER C		TUGR1 C
Rating Date						Oct-7-2015		Oct-7-2015		Oct-7-2015
Rating Type						YIELD		YIELD		YIELD
Rating Unit						kg		T-MET		kg
Sample Size, Unit						4,5 m2		1 ha		4,5 m2
Collection Basis, Unit						1 PLOT		1 PLOT		1 PLOT
Number of Subsamples						1		1		1
Crop Stage Majority						99		99		99
Crop Stage Minimum/Maximum						99 99		99 99		99 99
Crop Stage Scale						BBCH		BBCH		BBCH
Crop Density, Unit										
Pest Stage Majority										
Pest Stage Minimum/Maximum										
Pest Density, Unit										
Assessed By						Zöllner		Zöllner		Zöllner
Days After First/Last Applic.						142 33		142 33		142 33
Trt-Eval Interval						104 DA-C		104 DA-C		104 DA-C
Plant-Eval Interval						165 DP-1		165 DP-1		165 DP-1
Days After Emergence						139 DE-1		139 DE-1		139 DE-1
Untreated Rating Type										
ARM Action Codes						APoC		TY1 APoC		AA APoC
Sort Order for View						2		2		2
Number of Decimals						2		2		2
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	46	StDev	47	StDev	48	StDev
1	Untreated check				24,75b (100,0%)	1,73	55,00b (100,0%)	3,84	0,01a (100,0%)	0,91
2	Farm-specific herbicide			A B	27,79ab (112,3%)	2,18	61,75ab (112,3%)	4,84	0,00a (0,0%)	0,00
	Farm-specific fungicide			C D F H I J L N						
3	Farm-specific herbicide			A B	32,18a (130,0%)	3,24	71,50a (130,0%)	7,19	0,00a (50,0%)	0,64
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	32,84a (132,7%)	3,83	72,97a (132,7%)	8,51	0,04a (582,7%)	0,77
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						4,378		9,728		1,081t
Standard Deviation						2,737		6,082		0,676t
CV						9,31		9,31		144,74t
Bartlett's X2						2,007		2,007		0,33
P(Bartlett's X2)						0,571		0,571		0,848
Replicate F						1,389		1,389		1,000
Replicate Prob(F)						0,3080		0,3080		0,4363
Treatment F						7,785		7,785		1,848
Treatment Prob(F)						0,0072		0,0072		0,2088

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Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Crop Code					SOLTU		SOLTU		SOLTU	
BBCH Scale					BPOT		BPOT		BPOT	
Crop Scientific Name					Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name					Potato		Potato		Potato	
Crop Variety					Innovator		Innovator		Innovator	
Description					35-56 mm		> 56 mm			
Part Rated					TUGR2 C		TUGR3 C		TUBER C	
Rating Date					Oct-7-2015		Oct-7-2015		Oct-7-2015	
Rating Type					YIELD		YIELD		STACON	
Rating Unit					kg		kg		%	
Sample Size, Unit					4,5 m2		4,5 m2		1 PLOT	
Collection Basis, Unit					1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples					1		1		1	
Crop Stage Majority					99		99		99	
Crop Stage Minimum/Maximum					99 99		99 99		99 99	
Crop Stage Scale					BBCH		BBCH		BBCH	
Crop Density, Unit										
Pest Stage Majority										
Pest Stage Minimum/Maximum										
Pest Density, Unit										
Assessed By					Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.					142 33		142 33		142 33	
Trt-Eval Interval					104 DA-C		104 DA-C		104 DA-C	
Plant-Eval Interval					165 DP-1		165 DP-1		165 DP-1	
Days After Emergence					139 DE-1		139 DE-1		139 DE-1	
Untreated Rating Type										
ARM Action Codes					APoC		APoC		APoC	
Sort Order for View					2		2		2	
Number of Decimals					2		2		1	
Trt No.	Treatment Name	Rate	Unit	Appl Code	49	StDev	50	StDev	51	StDev
1	Untreated check				7,16a (100,0%)	2,49	17,65b (100,0%)	2,50	18,0a (100,0%)	0,9
2	Farm-specific herbicide			A B	5,70a (79,6%)	2,21	22,09ab (125,1%)	1,76	19,3a (107,1%)	0,7
	Farm-specific fungicide			C D F H I J L N						
3	Farm-specific herbicide			A B	6,25a (87,3%)	1,22	25,91a (146,8%)	2,66	19,2a (106,5%)	1,1
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	8,08a (112,7%)	1,01	24,71a (140,0%)	3,49	19,2a (106,5%)	1,6
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						2,673		4,741		1,95
Standard Deviation						1,671		2,964		1,22
CV						24,59		13,12		6,45
Bartlett's X2						2,888		1,223		2,053
P(Bartlett's X2)						0,409		0,748		0,562
Replicate F						1,866		0,250		0,381
Replicate Prob(F)						0,2057		0,8591		0,7692
Treatment F						1,561		6,100		0,987
Treatment Prob(F)						0,2655		0,0150		0,4417

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Weeds: *Chenopodium album* and *Fallopia convolvulus*

Pest Type						W Weed		W Weed		W Weed
Pest Code						CHEAL		POLCO		CHEAL
Pest Scientific Name						Chenopodium al>		Fallopia convo>		Chenopodium al>
Pest Name						Common lambsqu>		wild buckwheat		Common lambsqu>
Crop Code						SOLTU		SOLTU		SOLTU
BBCH Scale						BPOT		BPOT		BPOT
Crop Scientific Name						Solanum tubero>		Solanum tubero>		Solanum tubero>
Crop Name						Potato		Potato		Potato
Crop Variety						Innovator		Innovator		Innovator
Description										
Part Rated						PLANT P		PLANT P		PLANT P
Rating Date						Jun-4-2015		Jun-4-2015		Jun-18-2015
Rating Type						CONTRO		CONTRO		CONTRO
Rating Unit						%UNCK		%UNCK		%UNCK
Sample Size, Unit						1 PLOT		1 PLOT		1 PLOT
Collection Basis, Unit						1 PLOT		1 PLOT		1 PLOT
Number of Subsamples						1		1		1
Crop Stage Majority						12		12		39
Crop Stage Minimum/Maximum						12 12		12 12		39 39
Crop Stage Scale						BBCH		BBCH		BBCH
Crop Density, Unit						10 PERCENT		10 PERCENT		95 PERCENT
Pest Stage Majority						11		11		63
Pest Stage Minimum/Maximum						11 12		11 11		55 65
Pest Density, Unit						13 PLA/m2		7 PLA/m2		13 PLA/m2
Assessed By						Zöllner		Zöllner		Zöllner
Days After First/Last Applic.						17 17		17 17		31 14
Trt-Eval Interval						17 DA-A		17 DA-A		31 DA-A
Plant-Eval Interval						40 DP-1		40 DP-1		54 DP-1
Days After Emergence						14 DE-1		14 DE-1		28 DE-1
Untreated Rating Type						PLA/M2		PLA/M2		PLA/M2
ARM Action Codes						EC		EC		EC
Sort Order for View						3		3		3
Number of Decimals										
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	1	StDev	2	StDev	5	StDev
1	Untreated check				13,3	6,4	6,5	3,9	13,3	6,4
2	Farm-specific herbicide			A B	100,0a	0,0	100,0a	0,0	100,0a	0,0
	Farm-specific fungicide			C D F H I J L N						
3	Farm-specific herbicide			A B	100,0a	0,0	100,0a	0,0	100,0a	0,0
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	100,0a	0,0	100,0a	0,0	100,0a	0,0
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						0,00		0,00		0,00
Standard Deviation						0,00		0,00		0,00
CV						0,0		0,0		0,0
Bartlett's X2						0,0		0,0		0,0
P(Bartlett's X2)						.		.		.
Replicate F						0,000		0,000		0,000
Replicate Prob(F)						1,0000		1,0000		1,0000
Treatment F						0,000		0,000		0,000
Treatment Prob(F)						1,0000		1,0000		1,0000

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Pest Type					W Weed	
Pest Code					POLCO	
Pest Scientific Name					Fallopia convo>	
Pest Name					wild buckwheat	
Crop Code					SOLTU	
BBCH Scale					BPOT	
Crop Scientific Name					Solanum tubero>	
Crop Name					Potato	
Crop Variety					Innovator	
Description						
Part Rated					PLANT P	
Rating Date					Jun-18-2015	
Rating Type					CONTRO	
Rating Unit					%UNCK	
Sample Size, Unit					1 PLOT	
Collection Basis, Unit					1 PLOT	
Number of Subsamples					1	
Crop Stage Majority					39	
Crop Stage Minimum/Maximum					39 39	
Crop Stage Scale					BBCH	
Crop Density, Unit					95 PERCENT	
Pest Stage Majority					55	
Pest Stage Minimum/Maximum					55 59	
Pest Density, Unit					7 PLA/m2	
Assessed By					Zöllner	
Days After First/Last Applic.					31 14	
Trt-Eval Interval					31 DA-A	
Plant-Eval Interval					54 DP-1	
Days After Emergence					28 DE-1	
Untreated Rating Type					PLA/M2	
ARM Action Codes					EC	
Sort Order for View					3	
Number of Decimals						
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	6	StDev
1	Untreated check				6,5	3,9
2	Farm-specific herbicide			A B	100,0a	0,0
	Farm-specific fungicide			C D F H I J L N		
3	Farm-specific herbicide			A B	100,0a	0,0
	MulchCover	6,0	l/ha	A B		
	Farm-specific fungicide			C D F H I J L N		
	CropCover	2,0	l/ha	C D F H I J L N		
4	Farm-specific herbicide			A B	100,0a	0,0
	MulchCover	6,0	l/ha	A B		
	Farm-specific fungicide			C E G I K M		
	CropCover	2,0	l/ha	C E G I K M		
LSD P=.05						0,00
Standard Deviation						0,00
CV						0,0
Bartlett's X2						0,0
P(Bartlett's X2)						.
Replicate F						0,000
Replicate Prob(F)						1,0000
Treatment F						0,000
Treatment Prob(F)						1,0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
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Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Phytophthora infestans

Pest Type						D Disease		D Disease		D Disease	
Pest Code						PHYTIN		PHYTIN		PHYTIN	
Pest Scientific Name						Phytophthora i>		Phytophthora i>		Phytophthora i>	
Pest Name						Late blight of>		Late blight of>		Late blight of>	
Crop Code						SOLTU		SOLTU		SOLTU	
BBCH Scale						BPOT		BPOT		BPOT	
Crop Scientific Name						Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name						Potato		Potato		Potato	
Crop Variety						Innovator		Innovator		Innovator	
Description											
Part Rated						PLANT P		PLANT P		PLANT P	
Rating Date						Jul-22-2015		Jul-22-2015		Jul-31-2015	
Rating Type						PESINC		PESSEV		PESINC	
Rating Unit						%		%		%	
Sample Size, Unit						1 PLOT		1 PLOT		1 PLOT	
Collection Basis, Unit						1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples						1		1		1	
Crop Stage Majority						71		71		73	
Crop Stage Minimum/Maximum						71 72		71 72		71 75	
Crop Stage Scale						BBCH		BBCH		BBCH	
Crop Density, Unit						100 PERCENT		100 PERCENT		100 PERCENT	
Pest Stage Majority											
Pest Stage Minimum/Maximum											
Pest Density, Unit											
Assessed By						Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.						65 5		65 5		74 9	
Trt-Eval Interval						27 DA-C		27 DA-C		36 DA-C	
Plant-Eval Interval						88 DP-1		88 DP-1		97 DP-1	
Days After Emergence						62 DE-1		62 DE-1		71 DE-1	
Untreated Rating Type											
ARM Action Codes						APC		APC		APC	
Sort Order for View						4		4		4	
Number of Decimals											
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	9	StDev	10	StDev	12	StDev
1	Untreated check				5,8a (0,0%)	1,5	5,0a (0,0%)	0,0	5,0a (0,0%)	0,0
2	Farm-specific herbicide			A B	0,0b (100,0%)	0,0	0,0b (100,0%)	0,0	0,5b (90,0%)	0,6
	Farm-specific fungicide			C D F H I J L N						
3	Farm-specific herbicide			A B	0,0b (100,0%)	0,0	0,0b (100,0%)	0,0	0,3b (95,0%)	0,5
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	0,0b (100,0%)	0,0	0,0b (100,0%)	0,0	0,5b (90,0%)	0,6
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						1,20		0,00		0,85
Standard Deviation						0,75		0,00		0,53
CV						52,17		0,0		34,15
Bartlett's X2						0,0		0,0		0,074
P(Bartlett's X2)						.		.		0,963
Replicate F						1,000		0,000		0,220
Replicate Prob(F)						0,4363		1,0000		0,8804
Treatment F						58,778		0,000		73,976
Treatment Prob(F)						0,0001		1,0000		0,0001

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Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Pest Type						D Disease		D Disease		D Disease	
Pest Code						PHYTIN		PHYTIN		PHYTIN	
Pest Scientific Name						Phytophthora i>		Phytophthora i>		Phytophthora i>	
Pest Name						Late blight of>		Late blight of>		Late blight of>	
Crop Code						SOLTU		SOLTU		SOLTU	
BBCH Scale						BPOT		BPOT		BPOT	
Crop Scientific Name						Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name						Potato		Potato		Potato	
Crop Variety						Innovator		Innovator		Innovator	
Description											
Part Rated						PLANT P		PLANT P		PLANT P	
Rating Date						Jul-31-2015		Aug-6-2015		Aug-6-2015	
Rating Type						PESSEV		PESINC		PESSEV	
Rating Unit						%		%		%	
Sample Size, Unit						1 PLOT		1 PLOT		1 PLOT	
Collection Basis, Unit						1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples						1		1		1	
Crop Stage Majority						73		75		75	
Crop Stage Minimum/Maximum						71 75		71 75		71 75	
Crop Stage Scale						BBCH		BBCH		BBCH	
Crop Density, Unit						100 PERCENT		100 PERCENT		100 PERCENT	
Pest Stage Majority											
Pest Stage Minimum/Maximum											
Pest Density, Unit											
Assessed By						Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.						74 9		80 6		80 6	
Trt-Eval Interval						36 DA-C		42 DA-C		42 DA-C	
Plant-Eval Interval						97 DP-1		103 DP-1		103 DP-1	
Days After Emergence						71 DE-1		77 DE-1		77 DE-1	
Untreated Rating Type											
ARM Action Codes						APC		APC		APC	
Sort Order for View						4		4		4	
Number of Decimals											
Trt No.	Treatment Name	Rate	Unit	Appl Code	13	StDev	15	StDev	16	StDev
1	Untreated check				5,0a (0,0%)	0,0	6,5a (0,0%)	1,7	5,0a (0,0%)	0,0
2	Farm-specific herbicide			A B	0,5b	0,6	3,5b	1,9	1,0b	0,0
	Farm-specific fungicide			C D F H I J L N	(90,0%)		(46,2%)		(80,0%)	
3	Farm-specific herbicide			A B	0,3b	0,5	2,5b	1,0	1,0b	0,0
	MulchCover	6,0	l/ha	A B	(95,0%)		(61,5%)		(80,0%)	
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	0,5b	0,6	2,0b	1,2	1,0b	0,0
	MulchCover	6,0	l/ha	A B	(90,0%)		(69,2%)		(80,0%)	
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						0,85		1,98		0,00
Standard Deviation						0,53		1,24		0,00
CV						34,15		34,1		0,0
Bartlett's X2						0,074		1,516		0,0
P(Bartlett's X2)						0,963		0,678		.
Replicate F						0,220		2,891		0,000
Replicate Prob(F)						0,8804		0,0946		1,0000
Treatment F						73,976		10,636		0,000
Treatment Prob(F)						0,0001		0,0026		1,0000

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Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Pest Type				D Disease		D Disease		D Disease	
Pest Code				PHYTIN		PHYTIN		PHYTIN	
Pest Scientific Name				Phytophthora i>		Phytophthora i>		Phytophthora i>	
Pest Name				Late blight of>		Late blight of>		Late blight of>	
Crop Code				SOLTU		SOLTU		SOLTU	
BBCH Scale				BPOT		BPOT		BPOT	
Crop Scientific Name				Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name				Potato		Potato		Potato	
Crop Variety				Innovator		Innovator		Innovator	
Description									
Part Rated				PLANT P		PLANT P		PLANT P	
Rating Date				Aug-18-2015		Aug-18-2015		Aug-24-2015	
Rating Type				PESINC		PESSEV		PESINC	
Rating Unit				%		%		%	
Sample Size, Unit				1 PLOT		1 PLOT		1 PLOT	
Collection Basis, Unit				1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples				1		1		1	
Crop Stage Majority				85		85		87	
Crop Stage Minimum/Maximum				85 89		85 89		85 89	
Crop Stage Scale				BBCH		BBCH		BBCH	
Crop Density, Unit				95 PERCENT		95 PERCENT		75 PERCENT	
Pest Stage Majority									
Pest Stage Minimum/Maximum									
Pest Density, Unit									
Assessed By				Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.				92 12		92 12		98 3	
Trt-Eval Interval				54 DA-C		54 DA-C		60 DA-C	
Plant-Eval Interval				115 DP-1		115 DP-1		121 DP-1	
Days After Emergence				89 DE-1		89 DE-1		95 DE-1	
Untreated Rating Type									
ARM Action Codes				AS APC		AL APC		AL APC	
Sort Order for View				4		4		4	
Number of Decimals									
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	18	StDev	19	StDev	21	StDev
1	Untreated check				9,2a (0,0%)	0,2	7,5a (0,0%)	0,1	68,8a (0,0%)	0,1
2	Farm-specific herbicide			A B	4,2b	0,1	2,7b	0,1	10,1b	0,2
	Farm-specific fungicide			C D F H I J L N	(54,1%)		(63,5%)		(85,3%)	
3	Farm-specific herbicide			A B	3,2b	0,1	2,0b	0,0	6,0c	0,1
	MulchCover	6,0	l/ha	A B	(64,9%)		(73,2%)		(91,3%)	
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	4,0b	0,2	2,7b	0,1	5,0c	0,0
	MulchCover	6,0	l/ha	A B	(57,0%)		(63,5%)		(92,7%)	
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						0,27t		0,08t		0,20t
Standard Deviation						0,17t		0,05t		0,12t
CV						7,36t		7,91t		11,07t
Bartlett's X2						0,977		0,066		2,055
P(Bartlett's X2)						0,807		0,968		0,358
Replicate F						0,040		1,256		1,851
Replicate Prob(F)						0,9886		0,3464		0,2082
Treatment F						38,353		62,302		61,745
Treatment Prob(F)						0,0001		0,0001		0,0001

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Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Pest Type				D Disease		D Disease		D Disease
Pest Code				PHYTIN		PHYTIN		PHYTIN
Pest Scientific Name				Phytophthora i>		Phytophthora i>		Phytophthora i>
Pest Name				Late blight of>		Late blight of>		Late blight of>
Crop Code				SOLTU		SOLTU		SOLTU
BBCH Scale				BPOT		BPOT		BPOT
Crop Scientific Name				Solanum tubero>		Solanum tubero>		Solanum tubero>
Crop Name				Potato		Potato		Potato
Crop Variety				Innovator		Innovator		Innovator
Description								
Part Rated				PLANT P		PLANT P		PLANT P
Rating Date				Aug-24-2015		Aug-31-2015		Aug-31-2015
Rating Type				PESSEV		PESINC		PESSEV
Rating Unit				%		%		%
Sample Size, Unit				1 PLOT		1 PLOT		1 PLOT
Collection Basis, Unit				1 PLOT		1 PLOT		1 PLOT
Number of Subsamples				1		1		1
Crop Stage Majority				87		87		87
Crop Stage Minimum/Maximum				85 89		85 89		85 89
Crop Stage Scale				BBCH		BBCH		BBCH
Crop Density, Unit				75 PERCENT		75 PERCENT		75 PERCENT
Pest Stage Majority								
Pest Stage Minimum/Maximum								
Pest Density, Unit								
Assessed By				Zöllner		Zöllner		Zöllner
Days After First/Last Applic.				98 3		105 7		105 7
Trt-Eval Interval				60 DA-C		67 DA-C		67 DA-C
Plant-Eval Interval				121 DP-1		128 DP-1		128 DP-1
Days After Emergence				95 DE-1		102 DE-1		102 DE-1
Untreated Rating Type								
ARM Action Codes				AL APC		AL APC		AS APC
Sort Order for View				4		4		4
Number of Decimals								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	22	StDev	26	StDev	27	StDev
1	Untreated check				10,33a (0,0%)	0,11	73,1a (0,0%)	0,1	14,8a (0,0%)	0,5
2	Farm-specific herbicide			A B	2,46b	0,07	12,3b	0,1	7,3b	0,5
	Farm-specific fungicide			C D F H I J L N	(76,1%)		(83,2%)		(50,7%)	
3	Farm-specific herbicide			A B	2,00b	0,00	12,3b	0,1	5,0b	0,0
	MulchCover	6,0	l/ha	A B	(80,6%)		(83,2%)		(66,2%)	
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	2,46b	0,07	14,6b	0,1	7,3b	0,5
	MulchCover	6,0	l/ha	A B	(76,1%)		(80,0%)		(50,7%)	
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						0,133t		0,08t		0,77t
Standard Deviation						0,083t		0,05t		0,48t
CV						12,76t		3,99t		16,28t
Bartlett's X2						0,807		0,797		0,001
P(Bartlett's X2)						0,668		0,85		0,999
Replicate F						0,348		9,589		0,494
Replicate Prob(F)						0,7917		0,0037		0,6953
Treatment F						41,858		188,085		7,679
Treatment Prob(F)						0,0001		0,0001		0,0075

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Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Pest Type						D Disease		D Disease		D Disease	
Pest Code						PHYTIN		PHYTIN		PHYTIN	
Pest Scientific Name						Phytophthora i>		Phytophthora i>		Phytophthora i>	
Pest Name						Late blight of>		Late blight of>		Late blight of>	
Crop Code						SOLTU		SOLTU		SOLTU	
BBCH Scale						BPOT		BPOT		BPOT	
Crop Scientific Name						Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name						Potato		Potato		Potato	
Crop Variety						Innovator		Innovator		Innovator	
Description											
Part Rated						PLANT P		PLANT P		PLANT P	
Rating Date						Sep-4-2015		Sep-4-2015		Sep-11-2015	
Rating Type						PESINC		PESSEV		PESINC	
Rating Unit						%		%		%	
Sample Size, Unit						1 PLOT		1 PLOT		1 PLOT	
Collection Basis, Unit						1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples						1		1		1	
Crop Stage Majority						89		89		89	
Crop Stage Minimum/Maximum						87 89		87 89		89 89	
Crop Stage Scale						BBCH		BBCH		BBCH	
Crop Density, Unit						60 PERCENT		60 PERCENT		40 PERCENT	
Pest Stage Majority											
Pest Stage Minimum/Maximum											
Pest Density, Unit											
Assessed By						Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.						109 4		109 4		116 7	
Trt-Eval Interval						71 DA-C		71 DA-C		78 DA-C	
Plant-Eval Interval						132 DP-1		132 DP-1		139 DP-1	
Days After Emergence						106 DE-1		106 DE-1		113 DE-1	
Untreated Rating Type											
ARM Action Codes						APC		AS APC		APC	
Sort Order for View						4		4		4	
Number of Decimals											
Trt No.	Treatment Name	Rate	Unit	Appl Code		31	StDev	32	StDev	36	StDev
1	Untreated check					100,0a (0,0%)	0,0	58,3a (0,0%)	0,7	100,0a (0,0%)	0,0
2	Farm-specific herbicide			A B		67,5b (32,5%)	12,6	13,7b (76,6%)	0,3	95,0a (5,0%)	10,0
	Farm-specific fungicide			C D F H I J L N							
3	Farm-specific herbicide			A B		55,0b (45,0%)	23,8	11,2b (80,9%)	0,3	67,5b (32,5%)	15,0
	MulchCover	6,0	l/ha	A B							
	Farm-specific fungicide			C D F H I J L N							
	CropCover	2,0	l/ha	C D F H I J L N							
4	Farm-specific herbicide			A B		65,0b (35,0%)	19,1	9,2b (84,2%)	1,0	80,0ab (20,0%)	8,2
	MulchCover	6,0	l/ha	A B							
	Farm-specific fungicide			C E G I K M							
	CropCover	2,0	l/ha	C E G I K M							
LSD P=.05							23,58		1,22t		16,87
Standard Deviation							14,74		0,76t		10,35
CV							20,51		17,03t		12,08
Bartlett's X2							1,066		4,592		1,102
P(Bartlett's X2)							0,587		0,204		0,576
Replicate F							2,022		0,197		0,993
Replicate Prob(F)							0,1813		0,8960		0,4440
Treatment F							7,006		31,201		8,156
Treatment Prob(F)							0,0099		0,0001		0,0081

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Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Pest Type				D Disease		D Disease		D Disease	
Pest Code				PHYTIN		PHYTIN		PHYTIN	
Pest Scientific Name				Phytophthora i>		Phytophthora i>		Phytophthora i>	
Pest Name				Late blight of>		Late blight of>		Late blight of>	
Crop Code				SOLTU		SOLTU		SOLTU	
BBCH Scale				BPOT		BPOT		BPOT	
Crop Scientific Name				Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name				Potato		Potato		Potato	
Crop Variety				Innovator		Innovator		Innovator	
Description									
Part Rated				PLANT P		PLANT P		PLANT P	
Rating Date				Sep-11-2015		Sep-16-2015		Sep-16-2015	
Rating Type				PESSEV		PESINC		PESSEV	
Rating Unit				%		%		%	
Sample Size, Unit				1 PLOT		1 PLOT		1 PLOT	
Collection Basis, Unit				1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples				1		1		1	
Crop Stage Majority				89		91		91	
Crop Stage Minimum/Maximum				89 89		91 95		91 95	
Crop Stage Scale				BBCH		BBCH		BBCH	
Crop Density, Unit				40 PERCENT		30 PERCENT		30 PERCENT	
Pest Stage Majority									
Pest Stage Minimum/Maximum									
Pest Density, Unit									
Assessed By				Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.				116 7		121 12		121 12	
Trt-Eval Interval				78 DA-C		83 DA-C		83 DA-C	
Plant-Eval Interval				139 DP-1		144 DP-1		144 DP-1	
Days After Emergence				113 DE-1		118 DE-1		118 DE-1	
Untreated Rating Type									
ARM Action Codes				APC		APC		APC	
Sort Order for View				4		4		4	
Number of Decimals									
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	37	StDev	41	StDev	42	StDev
1	Untreated check				63,5a (0,0%)	12,8	100,0a (0,0%)	0,0	50,0a (0,0%)	0,0
2	Farm-specific herbicide			A B	16,3b	2,5	97,5a	5,0	45,0a	10,0
	Farm-specific fungicide			C D F H I J L N	(73,6%)		(2,5%)		(10,0%)	
3	Farm-specific herbicide			A B	12,5b	2,9	90,0a	0,0	45,0a	5,8
	MulchCover	6,0	l/ha	A B	(79,7%)		(10,0%)		(10,0%)	
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	15,0b	7,1	88,8a	6,3	42,5a	5,0
	MulchCover	6,0	l/ha	A B	(75,7%)		(11,3%)		(15,0%)	
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						10,68		8,70		13,33
Standard Deviation						6,55		5,03		7,71
CV						24,43		5,34		16,89
Bartlett's X2						7,595		0,151		1,586
P(Bartlett's X2)						0,055		0,698		0,453
Replicate F						1,605		0,557		0,667
Replicate Prob(F)						0,2632		0,6626		0,6025
Treatment F						55,964		4,845		0,667
Treatment Prob(F)						0,0001		0,0482		0,6025

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Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Alternaria solani

Pest Type				D Disease		D Disease		D Disease
Pest Code				ALTESO		ALTESO		ALTESO
Pest Scientific Name				Alternaria sol>		Alternaria sol>		Alternaria sol>
Pest Name				Early blight o>		Early blight o>		Early blight o>
Crop Code				SOLTU		SOLTU		SOLTU
BBCH Scale				BPOT		BPOT		BPOT
Crop Scientific Name				Solanum tubero>		Solanum tubero>		Solanum tubero>
Crop Name				Potato		Potato		Potato
Crop Variety				Innovator		Innovator		Innovator
Description								
Part Rated				PLANT P		PLANT P		PLANT P
Rating Date				Aug-24-2015		Aug-24-2015		Aug-31-2015
Rating Type				PESINC		PESSEV		PESINC
Rating Unit				%		%		%
Sample Size, Unit				1 PLOT		1 PLOT		1 PLOT
Collection Basis, Unit				1 PLOT		1 PLOT		1 PLOT
Number of Subsamples				1		1		1
Crop Stage Majority				87		87		87
Crop Stage Minimum/Maximum				85 89		85 89		85 89
Crop Stage Scale				BBCH		BBCH		BBCH
Crop Density, Unit				75 PERCENT		75 PERCENT		75 PERCENT
Pest Stage Majority								
Pest Stage Minimum/Maximum								
Pest Density, Unit								
Assessed By				Zöllner		Zöllner		Zöllner
Days After First/Last Applic.				98 3		98 3		105 7
Trt-Eval Interval				60 DA-C		60 DA-C		67 DA-C
Plant-Eval Interval				121 DP-1		121 DP-1		128 DP-1
Days After Emergence				95 DE-1		95 DE-1		102 DE-1
Untreated Rating Type								
ARM Action Codes				AS APC		AL APC		AS APC
Sort Order for View				5		5		5
Number of Decimals								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	23	StDev	24	StDev	28	StDev
1	Untreated check				82,2a (0,0%)	0,7	3,97a (0,0%)	0,20	82,2a (0,0%)	0,7
2	Farm-specific herbicide			A B	19,3b (76,5%)	0,9	1,00b (74,8%)	0,00	19,3b (76,5%)	0,9
	Farm-specific fungicide			C D F H I J L N						
3	Farm-specific herbicide			A B	8,6c (89,5%)	0,4	1,00b (74,8%)	0,00	8,6c (89,5%)	0,4
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	9,2c (88,8%)	1,0	1,00b (74,8%)	0,00	9,2c (88,8%)	1,0
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						0,95t		0,159t		0,95t
Standard Deviation						0,60t		0,099t		0,60t
CV						12,1t		24,79t		12,1t
Bartlett's X2						1,989		0,0		1,989
P(Bartlett's X2)						0,575		.		0,575
Replicate F						4,341		1,000		4,341
Replicate Prob(F)						0,0376		0,4363		0,0376
Treatment F						92,161		15,925		92,161
Treatment Prob(F)						0,0001		0,0006		0,0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Pest Type						D Disease		D Disease		D Disease	
Pest Code						ALTESO		ALTESO		ALTESO	
Pest Scientific Name						Alternaria sol>		Alternaria sol>		Alternaria sol>	
Pest Name						Early blight o>		Early blight o>		Early blight o>	
Crop Code						SOLTU		SOLTU		SOLTU	
BBCH Scale						BPOT		BPOT		BPOT	
Crop Scientific Name						Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name						Potato		Potato		Potato	
Crop Variety						Innovator		Innovator		Innovator	
Description											
Part Rated						PLANT P		PLANT P		PLANT P	
Rating Date						Aug-31-2015		Sep-4-2015		Sep-4-2015	
Rating Type						PESSEV		PESINC		PESSEV	
Rating Unit						%		%		%	
Sample Size, Unit						1 PLOT		1 PLOT		1 PLOT	
Collection Basis, Unit						1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples						1		1		1	
Crop Stage Majority						87		89		89	
Crop Stage Minimum/Maximum						85 89		87 89		87 89	
Crop Stage Scale						BBCH		BBCH		BBCH	
Crop Density, Unit						75 PERCENT		60 PERCENT		60 PERCENT	
Pest Stage Majority											
Pest Stage Minimum/Maximum											
Pest Density, Unit											
Assessed By						Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.						105 7		109 4		109 4	
Trt-Eval Interval						67 DA-C		71 DA-C		71 DA-C	
Plant-Eval Interval						128 DP-1		132 DP-1		132 DP-1	
Days After Emergence						102 DE-1		106 DE-1		106 DE-1	
Untreated Rating Type											
ARM Action Codes						APC		APC		AS APC	
Sort Order for View						5		5		5	
Number of Decimals											
Trt No.	Treatment Name	Rate	Unit	Appl Code	29	StDev	33	StDev	34	StDev
1	Untreated check				6,88a (0,0%)	2,39	100,0a (0,0%)	0,0	40,54a (0,0%)	0,97
2	Farm-specific herbicide			A B	2,25a (67,3%)	2,22	72,5b (27,5%)	9,6	5,50b (86,4%)	0,57
	Farm-specific fungicide			C D F H I J L N						
3	Farm-specific herbicide			A B	2,50a (63,6%)	1,91	72,5b (27,5%)	15,0	4,28b (89,4%)	0,79
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	2,00a (70,9%)	2,00	65,0b (35,0%)	12,9	5,01b (87,6%)	0,39
	MulchCover	6,0	l/ha	A B						
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						3,918		19,59		1,303t
Standard Deviation						2,450		12,25		0,815t
CV						71,92		15,8		24,34t
Bartlett's X2						0,167		0,548		2,292
P(Bartlett's X2)						0,983		0,761		0,514
Replicate F						0,051		0,222		0,078
Replicate Prob(F)						0,9837		0,8786		0,9702
Treatment F						3,592		6,333		25,122
Treatment Prob(F)						0,0592		0,0134		0,0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Pest Type				D Disease		D Disease		D Disease	
Pest Code				ALTESO		ALTESO		ALTESO	
Pest Scientific Name				Alternaria sol>		Alternaria sol>		Alternaria sol>	
Pest Name				Early blight o>		Early blight o>		Early blight o>	
Crop Code				SOLTU		SOLTU		SOLTU	
BBCH Scale				BPOT		BPOT		BPOT	
Crop Scientific Name				Solanum tubero>		Solanum tubero>		Solanum tubero>	
Crop Name				Potato		Potato		Potato	
Crop Variety				Innovator		Innovator		Innovator	
Description									
Part Rated				PLANT P		PLANT P		PLANT P	
Rating Date				Sep-11-2015		Sep-11-2015		Sep-16-2015	
Rating Type				PESINC		PESSEV		PESINC	
Rating Unit				%		%		%	
Sample Size, Unit				1 PLOT		1 PLOT		1 PLOT	
Collection Basis, Unit				1 PLOT		1 PLOT		1 PLOT	
Number of Subsamples				1		1		1	
Crop Stage Majority				89		89		91	
Crop Stage Minimum/Maximum				89 89		89 89		91 95	
Crop Stage Scale				BBCH		BBCH		BBCH	
Crop Density, Unit				40 PERCENT		40 PERCENT		30 PERCENT	
Pest Stage Majority									
Pest Stage Minimum/Maximum									
Pest Density, Unit									
Assessed By				Zöllner		Zöllner		Zöllner	
Days After First/Last Applic.				116 7		116 7		121 12	
Trt-Eval Interval				78 DA-C		78 DA-C		83 DA-C	
Plant-Eval Interval				139 DP-1		139 DP-1		144 DP-1	
Days After Emergence				113 DE-1		113 DE-1		118 DE-1	
Untreated Rating Type									
ARM Action Codes				APC		AL APC		AA APC	
Sort Order for View				5		5		5	
Number of Decimals									
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	38	StDev	39	StDev	43	StDev
1	Untreated check				100,0a (0,0%)	0,0	35,2a (0,0%)	0,2	100,0a (0,0%)	0,0
2	Farm-specific herbicide			A B	82,5a	17,1	4,9b	0,2	96,2a	13,4
	Farm-specific fungicide			C D F H I J L N	(17,5%)		(86,8%)		(3,8%)	
3	Farm-specific herbicide			A B	82,5a	5,0	4,3b	0,2	95,4a	8,7
	MulchCover	6,0	l/ha	A B	(17,5%)		(88,3%)		(4,6%)	
	Farm-specific fungicide			C D F H I J L N						
	CropCover	2,0	l/ha	C D F H I J L N						
4	Farm-specific herbicide			A B	75,0a	17,3	6,0b	0,1	90,9a	13,6
	MulchCover	6,0	l/ha	A B	(25,0%)		(83,8%)		(9,1%)	
	Farm-specific fungicide			C E G I K M						
	CropCover	2,0	l/ha	C E G I K M						
LSD P=.05						20,38		0,36t		22,68t
Standard Deviation						12,50		0,22t		13,11t
CV						14,71		22,49t		16,45t
Bartlett's X2						3,851		1,348		0,64
P(Bartlett's X2)						0,146		0,718		0,726
Replicate F						1,280		0,392		0,562
Replicate Prob(F)						0,3454		0,7625		0,6595
Treatment F						2,880		12,860		1,270
Treatment Prob(F)						0,1029		0,0020		0,3661

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

Pest Type						D Disease	
Pest Code						ALTESO	
Pest Scientific Name						Alternaria sol>	
Pest Name						Early blight o>	
Crop Code						SOLTU	
BBCH Scale						BPOT	
Crop Scientific Name						Solanum tubero>	
Crop Name						Potato	
Crop Variety						Innovator	
Description							
Part Rated						PLANT P	
Rating Date						Sep-16-2015	
Rating Type						PESSEV	
Rating Unit						%	
Sample Size, Unit						1 PLOT	
Collection Basis, Unit						1 PLOT	
Number of Subsamples						1	
Crop Stage Majority						91	
Crop Stage Minimum/Maximum						91 95	
Crop Stage Scale						BBCH	
Crop Density, Unit						30 PERCENT	
Pest Stage Majority							
Pest Stage Minimum/Maximum							
Pest Density, Unit							
Assessed By						Zöllner	
Days After First/Last Applic.						121 12	
Trt-Eval Interval						83 DA-C	
Plant-Eval Interval						144 DP-1	
Days After Emergence						118 DE-1	
Untreated Rating Type							
ARM Action Codes						APC	
Sort Order for View						5	
Number of Decimals							
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	44		StDev
1	Untreated check				50,0a (0,0%)		0,0
2	Farm-specific herbicide			A B	13,8b (72,5%)		4,8
	Farm-specific fungicide			C D F H I J L N			
3	Farm-specific herbicide			A B	11,3b (77,5%)		6,3
	MulchCover	6,0	l/ha	A B			
	Farm-specific fungicide			C D F H I J L N			
	CropCover	2,0	l/ha	C D F H I J L N			
4	Farm-specific herbicide			A B	12,5b (75,0%)		5,0
	MulchCover	6,0	l/ha	A B			
	Farm-specific fungicide			C E G I K M			
	CropCover	2,0	l/ha	C E G I K M			
LSD P=.05							10,14
Standard Deviation							5,86
CV							26,8
Bartlett's X2							0,251
P(Bartlett's X2)							0,882
Replicate F							0,545
Replicate Prob(F)							0,6691
Treatment F							41,030
Treatment Prob(F)							0,0002

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
Missing data estimates are included in columns:Yates=36,37,38,39; Average=41,42,43,44

5.5.4 Single Plot Data

Crop Code					SOLTU	SOLTU	SOLTU
BBCH Scale					BPOT	BPOT	BPOT
Crop Scientific Name					Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name					Potato	Potato	Potato
Crop Variety					Innovator	Innovator	Innovator
Description							
Part Rated					PLANT C	PLANT C	PLANT C
Rating Date					Jun-4-2015	Jun-4-2015	Jun-18-2015
Rating Type					PHYGEN	VIGOR	PHYGEN
Rating Unit					%	1-10	%
Sample Size, Unit					1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit					1 PLOT	1 PLOT	1 PLOT
Number of Subsamples					1	1	1
Crop Stage Majority					12	12	39
Crop Stage Minimum/Maximum					12 12	12 12	39 39
Crop Stage Scale					BBCH	BBCH	BBCH
Crop Density, Unit					10 PERCENT	10 PERCENT	95 PERCENT
Pest Stage Majority							
Pest Stage Minimum/Maximum							
Pest Density, Unit							
Assessed By					Zöllner	Zöllner	Zöllner
Days After First/Last Applic.					17 17	17 17	31 14
Trt-Eval Interval					17 DA-A	17 DA-A	31 DA-A
Plant-Eval Interval					40 DP-1	40 DP-1	54 DP-1
Days After Emergence					14 DE-1	14 DE-1	28 DE-1
Untreated Rating Type							
ARM Action Codes							
Sort Order for View					1	1	1
Number of Decimals							
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	3	4	7
1	Untreated check				101	0,0	10,0	0,0
					202	0,0	10,0	0,0
					304	0,0	10,0	0,0
					401	0,0	10,0	0,0
					Mean =	0,0	10,0	0,0
2	Farm-specific herbicide			A B	102	0,0	10,0	0,0
	Farm-specific fungicide			C D F H I J L N	203	0,0	10,0	0,0
					305	0,0	10,0	0,0
					402	0,0	10,0	0,0
					Mean =	0,0	10,0	0,0
3	Farm-specific herbicide			A B	103	0,0	10,0	0,0
	MulchCover	6,0	l/ha	A B	204	0,0	10,0	0,0
	Farm-specific fungicide			C D F H I J L N	306	0,0	10,0	0,0
	CropCover	2,0	l/ha	C D F H I J L N	403	0,0	10,0	0,0
					Mean =	0,0	10,0	0,0
4	Farm-specific herbicide			A B	104	0,0	10,0	0,0
	MulchCover	6,0	l/ha	A B	205	0,0	10,0	0,0
	Farm-specific fungicide			C E G I K M	307	0,0	10,0	0,0
	CropCover	2,0	l/ha	C E G I K M	404	0,0	10,0	0,0
					Mean =	0,0	10,0	0,0

Crop Code						SOLTU	SOLTU	SOLTU
BBCH Scale						BPOT	BPOT	BPOT
Crop Scientific Name						Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name						Potato	Potato	Potato
Crop Variety						Innovator	Innovator	Innovator
Description								
Part Rated						PLANT C	PLANT C	PLANT C
Rating Date						Jun-18-2015	Jul-22-2015	Jul-31-2015
Rating Type						VIGOR	PHYGEN	PHYGEN
Rating Unit						1-10	%	%
Sample Size, Unit						1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit						1 PLOT	1 PLOT	1 PLOT
Number of Subsamples						1	1	1
Crop Stage Majority						39	71	73
Crop Stage Minimum/Maximum						39 39	71 72	71 75
Crop Stage Scale						BBCH	BBCH	BBCH
Crop Density, Unit						95 PERCENT	100 PERCENT	100 PERCENT
Pest Stage Majority								
Pest Stage Minimum/Maximum								
Pest Density, Unit								
Assessed By						Zöllner	Zöllner	Zöllner
Days After First/Last Applic.						31 14	65 5	74 9
Trt-Eval Interval						31 DA-A	27 DA-C	36 DA-C
Plant-Eval Interval						54 DP-1	88 DP-1	97 DP-1
Days After Emergence						28 DE-1	62 DE-1	71 DE-1
Untreated Rating Type								
ARM Action Codes								
Sort Order for View						1	1	1
Number of Decimals								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	8	11	14
1	Untreated check				101	10,0	0,0	0,0
					202	10,0	0,0	0,0
					304	10,0	0,0	0,0
					401	10,0	0,0	0,0
					Mean =	10,0	0,0	0,0
2	Farm-specific herbicide			A B	102	10,0	0,0	0,0
	Farm-specific fungicide			C D F H I J L N	203	10,0	0,0	0,0
					305	10,0	0,0	0,0
					402	10,0	0,0	0,0
					Mean =	10,0	0,0	0,0
3	Farm-specific herbicide			A B	103	10,0	0,0	0,0
	MulchCover	6,0	l/ha	A B	204	10,0	0,0	0,0
	Farm-specific fungicide			C D F H I J L N	306	10,0	0,0	0,0
	CropCover	2,0	l/ha	C D F H I J L N	403	10,0	0,0	0,0
					Mean =	10,0	0,0	0,0
4	Farm-specific herbicide			A B	104	10,0	0,0	0,0
	MulchCover	6,0	l/ha	A B	205	10,0	0,0	0,0
	Farm-specific fungicide			C E G I K M	307	10,0	0,0	0,0
	CropCover	2,0	l/ha	C E G I K M	404	10,0	0,0	0,0
					Mean =	10,0	0,0	0,0

Crop Code						SOLTU	SOLTU	SOLTU
BBCH Scale						BPOT	BPOT	BPOT
Crop Scientific Name						Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name						Potato	Potato	Potato
Crop Variety						Innovator	Innovator	Innovator
Description								
Part Rated						PLANT C	PLANT C	PLANT C
Rating Date						Aug-6-2015	Aug-18-2015	Aug-24-2015
Rating Type						PHYGEN	PHYGEN	PHYGEN
Rating Unit						%	%	%
Sample Size, Unit						1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit						1 PLOT	1 PLOT	1 PLOT
Number of Subsamples						1	1	1
Crop Stage Majority						75	85	87
Crop Stage Minimum/Maximum						71 75	85 89	85 89
Crop Stage Scale						BBCH	BBCH	BBCH
Crop Density, Unit						100 PERCENT	95 PERCENT	75 PERCENT
Pest Stage Majority								
Pest Stage Minimum/Maximum								
Pest Density, Unit								
Assessed By						Zöllner	Zöllner	Zöllner
Days After First/Last Applic.						80 6	92 12	98 3
Trt-Eval Interval						42 DA-C	54 DA-C	60 DA-C
Plant-Eval Interval						103 DP-1	115 DP-1	121 DP-1
Days After Emergence						77 DE-1	89 DE-1	95 DE-1
Untreated Rating Type								
ARM Action Codes								
Sort Order for View						1	1	1
Number of Decimals								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	17	20	25
1	Untreated check				101	0,0	0,0	0,0
					202	0,0	0,0	0,0
					304	0,0	0,0	0,0
					401	0,0	0,0	0,0
					Mean =	0,0	0,0	0,0
2	Farm-specific herbicide			A B	102	0,0	0,0	0,0
	Farm-specific fungicide			C D F H I J L N	203	0,0	0,0	0,0
					305	0,0	0,0	0,0
					402	0,0	0,0	0,0
					Mean =	0,0	0,0	0,0
3	Farm-specific herbicide			A B	103	0,0	0,0	0,0
	MulchCover	6,0	l/ha	A B	204	0,0	0,0	0,0
	Farm-specific fungicide			C D F H I J L N	306	0,0	0,0	0,0
	CropCover	2,0	l/ha	C D F H I J L N	403	0,0	0,0	0,0
					Mean =	0,0	0,0	0,0
4	Farm-specific herbicide			A B	104	0,0	0,0	0,0
	MulchCover	6,0	l/ha	A B	205	0,0	0,0	0,0
	Farm-specific fungicide			C E G I K M	307	0,0	0,0	0,0
	CropCover	2,0	l/ha	C E G I K M	404	0,0	0,0	0,0
					Mean =	0,0	0,0	0,0

Crop Code						SOLTU	SOLTU	SOLTU
BBCH Scale						BPOT	BPOT	BPOT
Crop Scientific Name						Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name						Potato	Potato	Potato
Crop Variety						Innovator	Innovator	Innovator
Description								
Part Rated						PLANT C	PLANT C	PLANT C
Rating Date						Aug-31-2015	Sep-4-2015	Sep-11-2015
Rating Type						PHYGEN	PHYGEN	PHYGEN
Rating Unit						%	%	%
Sample Size, Unit						1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit						1 PLOT	1 PLOT	1 PLOT
Number of Subsamples						1	1	1
Crop Stage Majority						87	89	89
Crop Stage Minimum/Maximum						85 89	87 89	89 89
Crop Stage Scale						BBCH	BBCH	BBCH
Crop Density, Unit						75 PERCENT	60 PERCENT	40 PERCENT
Pest Stage Majority								
Pest Stage Minimum/Maximum								
Pest Density, Unit								
Assessed By						Zöllner	Zöllner	Zöllner
Days After First/Last Applic.						105 7	109 4	116 7
Trt-Eval Interval						67 DA-C	71 DA-C	78 DA-C
Plant-Eval Interval						128 DP-1	132 DP-1	139 DP-1
Days After Emergence						102 DE-1	106 DE-1	113 DE-1
Untreated Rating Type								
ARM Action Codes								
Sort Order for View						1	1	1
Number of Decimals								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	30	35	40
1	Untreated check				101	0,0	0,0	0,0
					202	0,0	0,0	0,0
					304	0,0	0,0	0,0
					401	0,0	0,0	0,0
					Mean =	0,0	0,0	0,0
2	Farm-specific herbicide			A B	102	0,0	0,0	0,0
	Farm-specific fungicide			C D F H I J L N	203	0,0	0,0	0,0
					305	0,0	0,0	0,0
					402	0,0	0,0	0,0
					Mean =	0,0	0,0	0,0
3	Farm-specific herbicide			A B	103	0,0	0,0	0,0
	MulchCover	6,0	l/ha	A B	204	0,0	0,0	0,0
	Farm-specific fungicide			C D F H I J L N	306	0,0	0,0	0,0
	CropCover	2,0	l/ha	C D F H I J L N	403	0,0	0,0	0,0
					Mean =	0,0	0,0	0,0
4	Farm-specific herbicide			A B	104	0,0	0,0	0,0
	MulchCover	6,0	l/ha	A B	205	0,0	0,0	0,0
	Farm-specific fungicide			C E G I K M	307	0,0	0,0	0,0
	CropCover	2,0	l/ha	C E G I K M	404	0,0	0,0	0,0
					Mean =	0,0	0,0	0,0

Crop Code							SOLTU
BBCH Scale							BPOT
Crop Scientific Name							Solanum tubero>
Crop Name							Potato
Crop Variety							Innovator
Description							
Part Rated							PLANT C
Rating Date							Sep-16-2015
Rating Type							PHYGEN
Rating Unit							%
Sample Size, Unit							1 PLOT
Collection Basis, Unit							1 PLOT
Number of Subsamples							1
Crop Stage Majority							91
Crop Stage Minimum/Maximum							91 95
Crop Stage Scale							BBCH
Crop Density, Unit							30 PERCENT
Pest Stage Majority							
Pest Stage Minimum/Maximum							
Pest Density, Unit							
Assessed By							Zöllner
Days After First/Last Applic.							121 12
Trt-Eval Interval							83 DA-C
Plant-Eval Interval							144 DP-1
Days After Emergence							118 DE-1
Untreated Rating Type							
ARM Action Codes							
Sort Order for View							1
Number of Decimals							
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code		Plot	45
1	Untreated check					101	0,0
						202	0,0
						304	0,0
						401	0,0
						Mean =	0,0
2	Farm-specific herbicide			A B		102	0,0
	Farm-specific fungicide			C D F H I J L N		203	0,0
						305	0,0
						402	0,0
						Mean =	0,0
3	Farm-specific herbicide			A B		103	0,0
	MulchCover	6,0	l/ha	A B		204	0,0
	Farm-specific fungicide			C D F H I J L N		306	0,0
	CropCover	2,0	l/ha	C D F H I J L N		403	0,0
						Mean =	0,0
4	Farm-specific herbicide			A B		104	0,0
	MulchCover	6,0	l/ha	A B		205	0,0
	Farm-specific fungicide			C E G I K M		307	0,0
	CropCover	2,0	l/ha	C E G I K M		404	0,0
						Mean =	0,0

Crop Code					SOLTU	SOLTU	SOLTU
BBCH Scale					BPOT	BPOT	BPOT
Crop Scientific Name					Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name					Potato	Potato	Potato
Crop Variety					Innovator	Innovator	Innovator
Description							< 35 mm
Part Rated					TUBER C	TUBER C	TUGR1 C
Rating Date					Oct-7-2015	Oct-7-2015	Oct-7-2015
Rating Type					YIELD	YIELD	YIELD
Rating Unit					kg	T-MET	kg
Sample Size, Unit					4,5 m2	1 ha	4,5 m2
Collection Basis, Unit					1 PLOT	1 PLOT	1 PLOT
Number of Subsamples					1	1	1
Crop Stage Majority					99	99	99
Crop Stage Minimum/Maximum					99 99	99 99	99 99
Crop Stage Scale					BBCH	BBCH	BBCH
Crop Density, Unit							
Pest Stage Majority							
Pest Stage Minimum/Maximum							
Pest Density, Unit							
Assessed By					Zöllner	Zöllner	Zöllner
Days After First/Last Applic.					142 33	142 33	142 33
Trt-Eval Interval					104 DA-C	104 DA-C	104 DA-C
Plant-Eval Interval					165 DP-1	165 DP-1	165 DP-1
Days After Emergence					139 DE-1	139 DE-1	139 DE-1
Untreated Rating Type							
ARM Action Codes					APoC	TY1 APoC	AA APoC
Sort Order for View					2	2	2
Number of Decimals					2	2	2
Trt No. Treatment Name	Rate	Rate Unit	Appl Code	Plot	46	47	48
1 Untreated check				101	25,55	56,78	0,00
				202	26,35	58,56	0,00
				304	24,75	55,00	0,00
				401	22,35	49,67	0,10
				Mean =	24,75	55,00	0,01t
2 Farm-specific herbicide			A B	102	29,60	65,78	0,00
Farm-specific fungicide			C D F H I J L N	203	28,80	64,00	0,00
				305	28,10	62,44	0,00
				402	24,65	54,78	0,00
				Mean =	27,79	61,75	0,00t
3 Farm-specific herbicide			A B	103	33,35	74,11	0,00
MulchCover	6,0	l/ha	A B	204	34,25	76,11	0,00
Farm-specific fungicide			C D F H I J L N	306	27,35	60,78	0,05
CropCover	2,0	l/ha	C D F H I J L N	403	33,75	75,00	0,00
				Mean =	32,18	71,50	0,00t
4 Farm-specific herbicide			A B	104	37,85	84,11	0,10
MulchCover	6,0	l/ha	A B	205	28,75	63,89	0,00
Farm-specific fungicide			C E G I K M	307	31,45	69,89	0,05
CropCover	2,0	l/ha	C E G I K M	404	33,30	74,00	0,05
				Mean =	32,84	72,97	0,04t

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Crop Code	SOLTU	SOLTU	SOLTU
BBCH Scale	BPOT	BPOT	BPOT
Crop Scientific Name	Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name	Potato	Potato	Potato
Crop Variety	Innovator	Innovator	Innovator
Description	35-56 mm	> 56 mm	
Part Rated	TUGR2 C	TUGR3 C	TUBER C
Rating Date	Oct-7-2015	Oct-7-2015	Oct-7-2015
Rating Type	YIELD	YIELD	STACON
Rating Unit	kg	kg	%
Sample Size, Unit	4,5 m2	4,5 m2	1 PLOT
Collection Basis, Unit	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Crop Stage Majority	99	99	99
Crop Stage Minimum/Maximum	99 99	99 99	99 99
Crop Stage Scale	BBCH	BBCH	BBCH
Crop Density, Unit			
Pest Stage Majority			
Pest Stage Minimum/Maximum			
Pest Density, Unit			
Assessed By	Zöllner	Zöllner	Zöllner
Days After First/Last Applic.	142 33	142 33	142 33
Trt-Eval Interval	104 DA-C	104 DA-C	104 DA-C
Plant-Eval Interval	165 DP-1	165 DP-1	165 DP-1
Days After Emergence	139 DE-1	139 DE-1	139 DE-1
Untreated Rating Type			
ARM Action Codes	APoC	APoC	APoC
Sort Order for View	2	2	2
Number of Decimals	2	2	1

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	49	50	51
1	Untreated check				101	10,10	15,45	17,5
					202	7,85	18,85	19,0
					304	4,15	20,60	18,5
					401	6,55	15,70	17,0
					Mean =	7,16	17,65	18,0
2	Farm-specific herbicide			A B	102	7,05	22,55	19,0
	Farm-specific fungicide			C D F H I J L N	203	4,55	24,25	20,1
					305	8,00	20,10	18,5
					402	3,20	21,45	19,5
					Mean =	5,70	22,09	19,3
3	Farm-specific herbicide			A B	103	6,30	27,05	18,5
	MulchCover	6,0	l/ha	A B	204	7,95	26,30	18,0
	Farm-specific fungicide			C D F H I J L N	306	5,20	22,10	20,1
	CropCover	2,0	l/ha	C D F H I J L N	403	5,55	28,20	20,1
					Mean =	6,25	25,91	19,2
4	Farm-specific herbicide			A B	104	9,30	28,45	20,6
	MulchCover	6,0	l/ha	A B	205	8,40	20,35	20,1
	Farm-specific fungicide			C E G I K M	307	7,65	23,75	19,0
	CropCover	2,0	l/ha	C E G I K M	404	6,95	26,30	17,0
					Mean =	8,08	24,71	19,2

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FINAL REPORT

Pest Type					W Weed	W Weed
Pest Code					CHEAL	POLCO
Pest Scientific Name					Chenopodium al>	Fallopia convo>
Pest Name					Common lambsqu>	wild buckwheat
Crop Code					SOLTU	SOLTU
BBCH Scale					BPOT	BPOT
Crop Scientific Name					Solanum tubero>	Solanum tubero>
Crop Name					Potato	Potato
Crop Variety					Innovator	Innovator
Description						
Part Rated					PLANT P	PLANT P
Rating Date					Jun-4-2015	Jun-4-2015
Rating Type					CONTRO	CONTRO
Rating Unit					%UNCK	%UNCK
Sample Size, Unit					1 PLOT	1 PLOT
Collection Basis, Unit					1 PLOT	1 PLOT
Number of Subsamples					1	1
Crop Stage Majority					12	12
Crop Stage Minimum/Maximum					12 12	12 12
Crop Stage Scale					BBCH	BBCH
Crop Density, Unit					10 PERCENT	10 PERCENT
Pest Stage Majority					11	11
Pest Stage Minimum/Maximum					11 12	11 11
Pest Density, Unit					13 PLA/m2	7 PLA/m2
Assessed By					Zöllner	Zöllner
Days After First/Last Applic.					17 17	17 17
Trt-Eval Interval					17 DA-A	17 DA-A
Plant-Eval Interval					40 DP-1	40 DP-1
Days After Emergence					14 DE-1	14 DE-1
Untreated Rating Type					PLA/M2	PLA/M2
ARM Action Codes					EC	EC
Sort Order for View					3	3
Number of Decimals						
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	1	2
1	Untreated check				101	7,0	5,0
					202	16,0	8,0
					304	9,0	2,0
					401	21,0	11,0
					Mean =	13,3	6,5
2	Farm-specific herbicide			A B	102	100,0	100,0
	Farm-specific fungicide			C D F H I J L N	203	100,0	100,0
					305	100,0	100,0
					402	100,0	100,0
					Mean =	100,0	100,0
3	Farm-specific herbicide			A B	103	100,0	100,0
	MulchCover	6,0	l/ha	A B	204	100,0	100,0
	Farm-specific fungicide			C D F H I J L N	306	100,0	100,0
	CropCover	2,0	l/ha	C D F H I J L N	403	100,0	100,0
					Mean =	100,0	100,0
4	Farm-specific herbicide			A B	104	100,0	100,0
	MulchCover	6,0	l/ha	A B	205	100,0	100,0
	Farm-specific fungicide			C E G I K M	307	100,0	100,0
	CropCover	2,0	l/ha	C E G I K M	404	100,0	100,0
					Mean =	100,0	100,0

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FINAL REPORT

Pest Type					W Weed	W Weed
Pest Code					CHEAL	POLCO
Pest Scientific Name					Chenopodium al>	Fallopia convo>
Pest Name					Common lambsqu>	wild buckwheat
Crop Code					SOLTU	SOLTU
BBCH Scale					BPOT	BPOT
Crop Scientific Name					Solanum tubero>	Solanum tubero>
Crop Name					Potato	Potato
Crop Variety					Innovator	Innovator
Description						
Part Rated					PLANT P	PLANT P
Rating Date					Jun-18-2015	Jun-18-2015
Rating Type					CONTRO	CONTRO
Rating Unit					%UNCK	%UNCK
Sample Size, Unit					1 PLOT	1 PLOT
Collection Basis, Unit					1 PLOT	1 PLOT
Number of Subsamples					1	1
Crop Stage Majority					39	39
Crop Stage Minimum/Maximum					39 39	39 39
Crop Stage Scale					BBCH	BBCH
Crop Density, Unit					95 PERCENT	95 PERCENT
Pest Stage Majority					63	55
Pest Stage Minimum/Maximum					55 65	55 59
Pest Density, Unit					13 PLA/m2	7 PLA/m2
Assessed By					Zöllner	Zöllner
Days After First/Last Applic.					31 14	31 14
Trt-Eval Interval					31 DA-A	31 DA-A
Plant-Eval Interval					54 DP-1	54 DP-1
Days After Emergence					28 DE-1	28 DE-1
Untreated Rating Type					PLA/M2	PLA/M2
ARM Action Codes					EC	EC
Sort Order for View					3	3
Number of Decimals						
Trt No. Treatment Name	Rate	Rate Unit	Appl Code	Plot	5	6
1 Untreated check				101	7,0	5,0
				202	16,0	8,0
				304	9,0	2,0
				401	21,0	11,0
				Mean =	13,3	6,5
2 Farm-specific herbicide			A B	102	100,0	100,0
Farm-specific fungicide			C D F H I J L N	203	100,0	100,0
				305	100,0	100,0
				402	100,0	100,0
				Mean =	100,0	100,0
3 Farm-specific herbicide			A B	103	100,0	100,0
MulchCover	6,0	l/ha	A B	204	100,0	100,0
Farm-specific fungicide			C D F H I J L N	306	100,0	100,0
CropCover	2,0	l/ha	C D F H I J L N	403	100,0	100,0
				Mean =	100,0	100,0
4 Farm-specific herbicide			A B	104	100,0	100,0
MulchCover	6,0	l/ha	A B	205	100,0	100,0
Farm-specific fungicide			C E G I K M	307	100,0	100,0
CropCover	2,0	l/ha	C E G I K M	404	100,0	100,0
				Mean =	100,0	100,0

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Pest Type						D Disease	D Disease	D Disease
Pest Code						PHYTIN	PHYTIN	PHYTIN
Pest Scientific Name						Phytophthora i>	Phytophthora i>	Phytophthora i>
Pest Name						Late blight of>	Late blight of>	Late blight of>
Crop Code						SOLTU	SOLTU	SOLTU
BBCH Scale						BPOT	BPOT	BPOT
Crop Scientific Name						Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name						Potato	Potato	Potato
Crop Variety						Innovator	Innovator	Innovator
Description								
Part Rated						PLANT P	PLANT P	PLANT P
Rating Date						Jul-22-2015	Jul-22-2015	Jul-31-2015
Rating Type						PESINC	PESSEV	PESINC
Rating Unit						%	%	%
Sample Size, Unit						1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit						1 PLOT	1 PLOT	1 PLOT
Number of Subsamples						1	1	1
Crop Stage Majority						71	71	73
Crop Stage Minimum/Maximum						71 72	71 72	71 75
Crop Stage Scale						BBCH	BBCH	BBCH
Crop Density, Unit						100 PERCENT	100 PERCENT	100 PERCENT
Pest Stage Majority								
Pest Stage Minimum/Maximum								
Pest Density, Unit								
Assessed By						Zöllner	Zöllner	Zöllner
Days After First/Last Applic.						65 5	65 5	74 9
Trt-Eval Interval						27 DA-C	27 DA-C	36 DA-C
Plant-Eval Interval						88 DP-1	88 DP-1	97 DP-1
Days After Emergence						62 DE-1	62 DE-1	71 DE-1
Untreated Rating Type								
ARM Action Codes						APC	APC	APC
Sort Order for View						4	4	4
Number of Decimals								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	9	10	12
1	Untreated check				101	5,0	5,0	5,0
					202	5,0	5,0	5,0
					304	8,0	5,0	5,0
					401	5,0	5,0	5,0
					Mean =	5,8	5,0	5,0
2	Farm-specific herbicide			A B	102	0,0	0,0	0,0
	Farm-specific fungicide			C D F H I J L N	203	0,0	0,0	0,0
					305	0,0	0,0	1,0
					402	0,0	0,0	1,0
					Mean =	0,0	0,0	0,5
3	Farm-specific herbicide			A B	103	0,0	0,0	1,0
	MulchCover	6,0	l/ha	A B	204	0,0	0,0	0,0
	Farm-specific fungicide			C D F H I J L N	306	0,0	0,0	0,0
	CropCover	2,0	l/ha	C D F H I J L N	403	0,0	0,0	0,0
					Mean =	0,0	0,0	0,3
4	Farm-specific herbicide			A B	104	0,0	0,0	0,0
	MulchCover	6,0	l/ha	A B	205	0,0	0,0	1,0
	Farm-specific fungicide			C E G I K M	307	0,0	0,0	0,0
	CropCover	2,0	l/ha	C E G I K M	404	0,0	0,0	1,0
					Mean =	0,0	0,0	0,5

Pest Type	D Disease	D Disease	D Disease
Pest Code	PHYTIN	PHYTIN	PHYTIN
Pest Scientific Name	Phytophthora i>	Phytophthora i>	Phytophthora i>
Pest Name	Late blight of>	Late blight of>	Late blight of>
Crop Code	SOLTU	SOLTU	SOLTU
BBCH Scale	BPOT	BPOT	BPOT
Crop Scientific Name	Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name	Potato	Potato	Potato
Crop Variety	Innovator	Innovator	Innovator
Description			
Part Rated	PLANT P	PLANT P	PLANT P
Rating Date	Jul-31-2015	Aug-6-2015	Aug-6-2015
Rating Type	PESSEV	PESINC	PESSEV
Rating Unit	%	%	%
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Crop Stage Majority	73	75	75
Crop Stage Minimum/Maximum	71 75	71 75	71 75
Crop Stage Scale	BBCH	BBCH	BBCH
Crop Density, Unit	100 PERCENT	100 PERCENT	100 PERCENT
Pest Stage Majority			
Pest Stage Minimum/Maximum			
Pest Density, Unit			
Assessed By	Zöllner	Zöllner	Zöllner
Days After First/Last Applic.	74 9	80 6	80 6
Trt-Eval Interval	36 DA-C	42 DA-C	42 DA-C
Plant-Eval Interval	97 DP-1	103 DP-1	103 DP-1
Days After Emergence	71 DE-1	77 DE-1	77 DE-1
Untreated Rating Type			
ARM Action Codes	APC	APC	APC
Sort Order for View	4	4	4
Number of Decimals			

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	13	15	16
1	Untreated check				101	5,0	5,0	5,0
					202	5,0	5,0	5,0
					304	5,0	8,0	5,0
					401	5,0	8,0	5,0
					Mean =	5,0	6,5	5,0
2	Farm-specific herbicide			A B	102	0,0	1,0	1,0
	Farm-specific fungicide			C D F H I J L N	203	0,0	3,0	1,0
					305	1,0	5,0	1,0
					402	1,0	5,0	1,0
					Mean =	0,5	3,5	1,0
3	Farm-specific herbicide			A B	103	1,0	3,0	1,0
	MulchCover	6,0	l/ha	A B	204	0,0	3,0	1,0
	Farm-specific fungicide			C D F H I J L N	306	0,0	1,0	1,0
	CropCover	2,0	l/ha	C D F H I J L N	403	0,0	3,0	1,0
					Mean =	0,3	2,5	1,0
4	Farm-specific herbicide			A B	104	0,0	1,0	1,0
	MulchCover	6,0	l/ha	A B	205	1,0	1,0	1,0
	Farm-specific fungicide			C E G I K M	307	0,0	3,0	1,0
	CropCover	2,0	l/ha	C E G I K M	404	1,0	3,0	1,0
					Mean =	0,5	2,0	1,0

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Pest Type	D Disease	D Disease	D Disease
Pest Code	PHYTIN	PHYTIN	PHYTIN
Pest Scientific Name	Phytophthora i>	Phytophthora i>	Phytophthora i>
Pest Name	Late blight of>	Late blight of>	Late blight of>
Crop Code	SOLTU	SOLTU	SOLTU
BBCH Scale	BPOT	BPOT	BPOT
Crop Scientific Name	Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name	Potato	Potato	Potato
Crop Variety	Innovator	Innovator	Innovator
Description			
Part Rated	PLANT P	PLANT P	PLANT P
Rating Date	Aug-18-2015	Aug-18-2015	Aug-24-2015
Rating Type	PESINC	PESSEV	PESINC
Rating Unit	%	%	%
Sample Size, Unit	1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit	1 PLOT	1 PLOT	1 PLOT
Number of Subsamples	1	1	1
Crop Stage Majority	85	85	87
Crop Stage Minimum/Maximum	85 89	85 89	85 89
Crop Stage Scale	BBCH	BBCH	BBCH
Crop Density, Unit	95 PERCENT	95 PERCENT	75 PERCENT
Pest Stage Majority			
Pest Stage Minimum/Maximum			
Pest Density, Unit			
Assessed By	Zöllner	Zöllner	Zöllner
Days After First/Last Applic.	92 12	92 12	98 3
Trt-Eval Interval	54 DA-C	54 DA-C	60 DA-C
Plant-Eval Interval	115 DP-1	115 DP-1	121 DP-1
Days After Emergence	89 DE-1	89 DE-1	95 DE-1
Untreated Rating Type			
ARM Action Codes	AS APC	AL APC	AL APC
Sort Order for View	4	4	4
Number of Decimals			

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	18	19	21
1	Untreated check				101	8,0	6,0	80,0
					202	9,0	8,0	80,0
					304	10,0	8,0	70,0
					401	10,0	8,0	50,0
					Mean =	9,2t	7,5t	68,8t
2	Farm-specific herbicide			A B	102	5,0	3,0	5,0
	Farm-specific fungicide			C D F H I J L N	203	4,0	2,0	10,0
					305	4,0	3,0	20,0
					402	4,0	3,0	10,0
					Mean =	4,2t	2,7t	10,1t
3	Farm-specific herbicide			A B	103	4,0	2,0	5,0
	MulchCover	6,0	l/ha	A B	204	3,0	2,0	5,0
	Farm-specific fungicide			C D F H I J L N	306	3,0	2,0	10,0
	CropCover	2,0	l/ha	C D F H I J L N	403	3,0	2,0	5,0
					Mean =	3,2t	2,0t	6,0t
4	Farm-specific herbicide			A B	104	3,0	2,0	5,0
	MulchCover	6,0	l/ha	A B	205	5,0	3,0	5,0
	Farm-specific fungicide			C E G I K M	307	4,0	3,0	5,0
	CropCover	2,0	l/ha	C E G I K M	404	4,0	3,0	5,0
					Mean =	4,0t	2,7t	5,0t

Pest Type						D Disease	D Disease	D Disease
Pest Code						PHYTIN	PHYTIN	PHYTIN
Pest Scientific Name						Phytophthora i>	Phytophthora i>	Phytophthora i>
Pest Name						Late blight of>	Late blight of>	Late blight of>
Crop Code						SOLTU	SOLTU	SOLTU
BBCH Scale						BPOT	BPOT	BPOT
Crop Scientific Name						Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name						Potato	Potato	Potato
Crop Variety						Innovator	Innovator	Innovator
Description								
Part Rated						PLANT P	PLANT P	PLANT P
Rating Date						Aug-24-2015	Aug-31-2015	Aug-31-2015
Rating Type						PESSEV	PESINC	PESSEV
Rating Unit						%	%	%
Sample Size, Unit						1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit						1 PLOT	1 PLOT	1 PLOT
Number of Subsamples						1	1	1
Crop Stage Majority						87	87	87
Crop Stage Minimum/Maximum						85 89	85 89	85 89
Crop Stage Scale						BBCH	BBCH	BBCH
Crop Density, Unit						75 PERCENT	75 PERCENT	75 PERCENT
Pest Stage Majority								
Pest Stage Minimum/Maximum								
Pest Density, Unit								
Assessed By						Zöllner	Zöllner	Zöllner
Days After First/Last Applic.						98 3	105 7	105 7
Trt-Eval Interval						60 DA-C	67 DA-C	67 DA-C
Plant-Eval Interval						121 DP-1	128 DP-1	128 DP-1
Days After Emergence						95 DE-1	102 DE-1	102 DE-1
Untreated Rating Type								
ARM Action Codes						AL APC	AL APC	AS APC
Sort Order for View						4	4	4
Number of Decimals								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	22	26	27
1	Untreated check				101	10,00	80,0	15,0
					202	15,00	85,0	20,0
					304	7,50	70,0	10,0
					401	10,00	60,0	15,0
					Mean =	10,33t	73,1t	14,8t
2	Farm-specific herbicide			A B	102	3,00	10,0	10,0
	Farm-specific fungicide			C D F H I J L N	203	2,00	15,0	5,0
					305	2,00	15,0	5,0
					402	3,00	10,0	10,0
					Mean =	2,46t	12,3t	7,3t
3	Farm-specific herbicide			A B	103	2,00	10,0	5,0
	MulchCover	6,0	l/ha	A B	204	2,00	15,0	5,0
	Farm-specific fungicide			C D F H I J L N	306	2,00	15,0	5,0
	CropCover	2,0	l/ha	C D F H I J L N	403	2,00	10,0	5,0
					Mean =	2,00t	12,3t	5,0t
4	Farm-specific herbicide			A B	104	2,00	15,0	5,0
	MulchCover	6,0	l/ha	A B	205	2,00	20,0	5,0
	Farm-specific fungicide			C E G I K M	307	3,00	15,0	10,0
	CropCover	2,0	l/ha	C E G I K M	404	3,00	10,0	10,0
					Mean =	2,46t	14,6t	7,3t

Pest Type					D Disease	D Disease	D Disease
Pest Code					PHYTIN	PHYTIN	PHYTIN
Pest Scientific Name					Phytophthora i>	Phytophthora i>	Phytophthora i>
Pest Name					Late blight of>	Late blight of>	Late blight of>
Crop Code					SOLTU	SOLTU	SOLTU
BBCH Scale					BPOT	BPOT	BPOT
Crop Scientific Name					Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name					Potato	Potato	Potato
Crop Variety					Innovator	Innovator	Innovator
Description							
Part Rated					PLANT P	PLANT P	PLANT P
Rating Date					Sep-4-2015	Sep-4-2015	Sep-11-2015
Rating Type					PESINC	PESSEV	PESINC
Rating Unit					%	%	%
Sample Size, Unit					1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit					1 PLOT	1 PLOT	1 PLOT
Number of Subsamples					1	1	1
Crop Stage Majority					89	89	89
Crop Stage Minimum/Maximum					87 89	87 89	89 89
Crop Stage Scale					BBCH	BBCH	BBCH
Crop Density, Unit					60 PERCENT	60 PERCENT	40 PERCENT
Pest Stage Majority							
Pest Stage Minimum/Maximum							
Pest Density, Unit							
Assessed By					Zöllner	Zöllner	Zöllner
Days After First/Last Applic.					109 4	109 4	116 7
Trt-Eval Interval					71 DA-C	71 DA-C	78 DA-C
Plant-Eval Interval					132 DP-1	132 DP-1	139 DP-1
Days After Emergence					106 DE-1	106 DE-1	113 DE-1
Untreated Rating Type							
ARM Action Codes					APC	AS APC	APC
Sort Order for View					4	4	4
Number of Decimals							
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	31	32	36
1	Untreated check				101	100,0	50,0	100,0
					202	100,0	50,0	100,0*
					304	100,0	60,0	100,0
					401	100,0	75,0	100,0
				Mean =		100,0	58,3t	100,0
2	Farm-specific herbicide			A B	102	70,0	15,0	80,0
	Farm-specific fungicide			C D F H I J L N	203	70,0	15,0	100,0
					305	80,0	15,0	100,0
					402	50,0	10,0	100,0
				Mean =		67,5	13,7t	95,0
3	Farm-specific herbicide			A B	103	80,0	15,0	80,0
	MulchCover	6,0	l/ha	A B	204	70,0	10,0	80,0
	Farm-specific fungicide			C D F H I J L N	306	40,0	10,0	50,0
	CropCover	2,0	l/ha	C D F H I J L N	403	30,0	10,0	60,0
				Mean =		55,0	11,2t	67,5
4	Farm-specific herbicide			A B	104	50,0	5,0	80,0
	MulchCover	6,0	l/ha	A B	205	90,0	20,0	90,0
	Farm-specific fungicide			C E G I K M	307	70,0	10,0	70,0
	CropCover	2,0	l/ha	C E G I K M	404	50,0	5,0	80,0
				Mean =		65,0	9,2t	80,0

Pest Type						D Disease	D Disease	D Disease
Pest Code						PHYTIN	PHYTIN	PHYTIN
Pest Scientific Name						Phytophthora i>	Phytophthora i>	Phytophthora i>
Pest Name						Late blight of>	Late blight of>	Late blight of>
Crop Code						SOLTU	SOLTU	SOLTU
BBCH Scale						BPOT	BPOT	BPOT
Crop Scientific Name						Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name						Potato	Potato	Potato
Crop Variety						Innovator	Innovator	Innovator
Description								
Part Rated						PLANT P	PLANT P	PLANT P
Rating Date						Sep-11-2015	Sep-16-2015	Sep-16-2015
Rating Type						PESSEV	PESINC	PESSEV
Rating Unit						%	%	%
Sample Size, Unit						1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit						1 PLOT	1 PLOT	1 PLOT
Number of Subsamples						1	1	1
Crop Stage Majority						89	91	91
Crop Stage Minimum/Maximum						89 89	91 95	91 95
Crop Stage Scale						BBCH	BBCH	BBCH
Crop Density, Unit						40 PERCENT	30 PERCENT	30 PERCENT
Pest Stage Majority								
Pest Stage Minimum/Maximum								
Pest Density, Unit								
Assessed By						Zöllner	Zöllner	Zöllner
Days After First/Last Applic.						116 7	121 12	121 12
Trt-Eval Interval						78 DA-C	83 DA-C	83 DA-C
Plant-Eval Interval						139 DP-1	144 DP-1	144 DP-1
Days After Emergence						113 DE-1	118 DE-1	118 DE-1
Untreated Rating Type								
ARM Action Codes						APC	APC	APC
Sort Order for View						4	4	4
Number of Decimals								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	37	41	42
1	Untreated check				101	50,0	100,0	50,0
					202	68,9*	100,0*	50,0*
					304	60,0	100,0*	50,0*
					401	75,0	100,0*	50,0*
					Mean =	63,5	100,0	50,0
2	Farm-specific herbicide			A B	102	15,0	90,0	30,0
	Farm-specific fungicide			C D F H I J L N	203	20,0	100,0	50,0
					305	15,0	100,0	50,0
					402	15,0	100,0	50,0
					Mean =	16,3	97,5	45,0
3	Farm-specific herbicide			A B	103	15,0	90,0	50,0
	MulchCover	6,0	l/ha	A B	204	15,0	90,0	50,0
	Farm-specific fungicide			C D F H I J L N	306	10,0	90,0	40,0
	CropCover	2,0	l/ha	C D F H I J L N	403	10,0	90,0	40,0
					Mean =	12,5	90,0	45,0
4	Farm-specific herbicide			A B	104	10,0	90,0	40,0
	MulchCover	6,0	l/ha	A B	205	25,0	95,0	50,0
	Farm-specific fungicide			C E G I K M	307	15,0	80,0	40,0
	CropCover	2,0	l/ha	C E G I K M	404	10,0	90,0	40,0
					Mean =	15,0	88,8	42,5

Pest Type						D Disease	D Disease	D Disease
Pest Code						ALTESO	ALTESO	ALTESO
Pest Scientific Name						Alternaria sol>	Alternaria sol>	Alternaria sol>
Pest Name						Early blight o>	Early blight o>	Early blight o>
Crop Code						SOLTU	SOLTU	SOLTU
BBCH Scale						BPOT	BPOT	BPOT
Crop Scientific Name						Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name						Potato	Potato	Potato
Crop Variety						Innovator	Innovator	Innovator
Description								
Part Rated						PLANT P	PLANT P	PLANT P
Rating Date						Aug-24-2015	Aug-24-2015	Aug-31-2015
Rating Type						PESINC	PESSEV	PESINC
Rating Unit						%	%	%
Sample Size, Unit						1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit						1 PLOT	1 PLOT	1 PLOT
Number of Subsamples						1	1	1
Crop Stage Majority						87	87	87
Crop Stage Minimum/Maximum						85 89	85 89	85 89
Crop Stage Scale						BBCH	BBCH	BBCH
Crop Density, Unit						75 PERCENT	75 PERCENT	75 PERCENT
Pest Stage Majority								
Pest Stage Minimum/Maximum								
Pest Density, Unit								
Assessed By						Zöllner	Zöllner	Zöllner
Days After First/Last Applic.						98 3	98 3	105 7
Trt-Eval Interval						60 DA-C	60 DA-C	67 DA-C
Plant-Eval Interval						121 DP-1	121 DP-1	128 DP-1
Days After Emergence						95 DE-1	95 DE-1	102 DE-1
Untreated Rating Type								
ARM Action Codes						AS APC	AL APC	AS APC
Sort Order for View						5	5	5
Number of Decimals								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	23	24	28
1	Untreated check				101	80,0	7,50	80,0
					202	70,0	3,00	70,0
					304	80,0	2,00	80,0
					401	100,0	5,00	100,0
					Mean =	82,2t	3,97t	82,2t
2	Farm-specific herbicide			A B	102	20,0	1,00	20,0
	Farm-specific fungicide			C D F H I J L N	203	10,0	1,00	10,0
					305	30,0	1,00	30,0
					402	20,0	1,00	20,0
					Mean =	19,3t	1,00t	19,3t
3	Farm-specific herbicide			A B	103	10,0	1,00	10,0
	MulchCover	6,0	l/ha	A B	204	5,0	1,00	5,0
	Farm-specific fungicide			C D F H I J L N	306	10,0	1,00	10,0
	CropCover	2,0	l/ha	C D F H I J L N	403	10,0	1,00	10,0
					Mean =	8,6t	1,00t	8,6t
4	Farm-specific herbicide			A B	104	10,0	1,00	10,0
	MulchCover	6,0	l/ha	A B	205	5,0	1,00	5,0
	Farm-specific fungicide			C E G I K M	307	5,0	1,00	5,0
	CropCover	2,0	l/ha	C E G I K M	404	20,0	1,00	20,0
					Mean =	9,2t	1,00t	9,2t

Pest Type						D Disease	D Disease	D Disease
Pest Code						ALTESO	ALTESO	ALTESO
Pest Scientific Name						Alternaria sol>	Alternaria sol>	Alternaria sol>
Pest Name						Early blight o>	Early blight o>	Early blight o>
Crop Code						SOLTU	SOLTU	SOLTU
BBCH Scale						BPOT	BPOT	BPOT
Crop Scientific Name						Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name						Potato	Potato	Potato
Crop Variety						Innovator	Innovator	Innovator
Description								
Part Rated						PLANT P	PLANT P	PLANT P
Rating Date						Aug-31-2015	Sep-4-2015	Sep-4-2015
Rating Type						PESSEV	PESINC	PESSEV
Rating Unit						%	%	%
Sample Size, Unit						1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit						1 PLOT	1 PLOT	1 PLOT
Number of Subsamples						1	1	1
Crop Stage Majority						87	89	89
Crop Stage Minimum/Maximum						85 89	87 89	87 89
Crop Stage Scale						BBCH	BBCH	BBCH
Crop Density, Unit						75 PERCENT	60 PERCENT	60 PERCENT
Pest Stage Majority								
Pest Stage Minimum/Maximum								
Pest Density, Unit								
Assessed By						Zöllner	Zöllner	Zöllner
Days After First/Last Applic.						105 7	109 4	109 4
Trt-Eval Interval						67 DA-C	71 DA-C	71 DA-C
Plant-Eval Interval						128 DP-1	132 DP-1	132 DP-1
Days After Emergence						102 DE-1	106 DE-1	106 DE-1
Untreated Rating Type								
ARM Action Codes						APC	APC	AS APC
Sort Order for View						5	5	5
Number of Decimals								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	29	33	34
1	Untreated check				101	7,50	100,0	50,00
					202	5,00	100,0	50,00
					304	5,00	100,0	40,00
					401	10,00	100,0	25,00
					Mean =	6,88	100,0	40,54t
2	Farm-specific herbicide			A B	102	5,00	60,0	3,00
	Farm-specific fungicide			C D F H I J L N	203	1,00	80,0	5,00
					305	3,00	80,0	5,00
					402	0,00	70,0	10,00
					Mean =	2,25	72,5	5,50t
3	Farm-specific herbicide			A B	103	1,00	90,0	5,00
	MulchCover	6,0	l/ha	A B	204	5,00	60,0	2,00
	Farm-specific fungicide			C D F H I J L N	306	1,00	60,0	2,00
	CropCover	2,0	l/ha	C D F H I J L N	403	3,00	80,0	10,00
					Mean =	2,50	72,5	4,28t
4	Farm-specific herbicide			A B	104	1,00	50,0	5,00
	MulchCover	6,0	l/ha	A B	205	1,00	60,0	3,00
	Farm-specific fungicide			C E G I K M	307	5,00	80,0	7,50
	CropCover	2,0	l/ha	C E G I K M	404	1,00	70,0	5,00
					Mean =	2,00	65,0	5,01t

Pest Type						D Disease	D Disease	D Disease
Pest Code						ALTESO	ALTESO	ALTESO
Pest Scientific Name						Alternaria sol>	Alternaria sol>	Alternaria sol>
Pest Name						Early blight o>	Early blight o>	Early blight o>
Crop Code						SOLTU	SOLTU	SOLTU
BBCH Scale						BPOT	BPOT	BPOT
Crop Scientific Name						Solanum tubero>	Solanum tubero>	Solanum tubero>
Crop Name						Potato	Potato	Potato
Crop Variety						Innovator	Innovator	Innovator
Description								
Part Rated						PLANT P	PLANT P	PLANT P
Rating Date						Sep-11-2015	Sep-11-2015	Sep-16-2015
Rating Type						PESINC	PESSEV	PESINC
Rating Unit						%	%	%
Sample Size, Unit						1 PLOT	1 PLOT	1 PLOT
Collection Basis, Unit						1 PLOT	1 PLOT	1 PLOT
Number of Subsamples						1	1	1
Crop Stage Majority						89	89	91
Crop Stage Minimum/Maximum						89 89	89 89	91 95
Crop Stage Scale						BBCH	BBCH	BBCH
Crop Density, Unit						40 PERCENT	40 PERCENT	30 PERCENT
Pest Stage Majority								
Pest Stage Minimum/Maximum								
Pest Density, Unit								
Assessed By						Zöllner	Zöllner	Zöllner
Days After First/Last Applic.						116 7	116 7	121 12
Trt-Eval Interval						78 DA-C	78 DA-C	83 DA-C
Plant-Eval Interval						139 DP-1	139 DP-1	144 DP-1
Days After Emergence						113 DE-1	113 DE-1	118 DE-1
Untreated Rating Type								
ARM Action Codes						APC	AL APC	AA APC
Sort Order for View						5	5	5
Number of Decimals								
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	38	39	43
1	Untreated check				101	100,0	50,0	100,0
					202	100,0*	30,5*	100,0*
					304	100,0	40,0	100,0*
					401	100,0	25,0	100,0*
					Mean =	100,0	35,2t	100,0t
2	Farm-specific herbicide			A B	102	60,0	2,0	80,0
	Farm-specific fungicide			C D F H I J L N	203	80,0	5,0	90,0
					305	90,0	5,0	100,0
					402	100,0	10,0	100,0
					Mean =	82,5	4,9t	96,2t
3	Farm-specific herbicide			A B	103	90,0	5,0	100,0
	MulchCover	6,0	l/ha	A B	204	80,0	3,0	90,0
	Farm-specific fungicide			C D F H I J L N	306	80,0	2,0	90,0
	CropCover	2,0	l/ha	C D F H I J L N	403	80,0	10,0	95,0
					Mean =	82,5	4,3t	95,4t
4	Farm-specific herbicide			A B	104	50,0	5,0	70,0
	MulchCover	6,0	l/ha	A B	205	80,0	5,0	90,0
	Farm-specific fungicide			C E G I K M	307	90,0	10,0	100,0
	CropCover	2,0	l/ha	C E G I K M	404	80,0	5,0	90,0
					Mean =	75,0	6,0t	90,9t

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Pest Type	D Disease
Pest Code	ALTESO
Pest Scientific Name	Alternaria sol>
Pest Name	Early blight o>
Crop Code	SOLTU
BBCH Scale	BPOT
Crop Scientific Name	Solanum tubero>
Crop Name	Potato
Crop Variety	Innovator
Description	
Part Rated	PLANT P
Rating Date	Sep-16-2015
Rating Type	PESSEV
Rating Unit	%
Sample Size, Unit	1 PLOT
Collection Basis, Unit	1 PLOT
Number of Subsamples	1
Crop Stage Majority	91
Crop Stage Minimum/Maximum	91 95
Crop Stage Scale	BBCH
Crop Density, Unit	30 PERCENT
Pest Stage Majority	
Pest Stage Minimum/Maximum	
Pest Density, Unit	
Assessed By	Zöllner
Days After First/Last Applic.	121 12
Trt-Eval Interval	83 DA-C
Plant-Eval Interval	144 DP-1
Days After Emergence	118 DE-1
Untreated Rating Type	
ARM Action Codes	APC
Sort Order for View	5
Number of Decimals	

Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	Plot	44
1	Untreated check				101	50,0
					202	50,0*
					304	50,0*
					401	50,0*
					Mean =	50,0
2	Farm-specific herbicide			A B	102	15,0
	Farm-specific fungicide			C D F H I J L N	203	10,0
					305	10,0
					402	20,0
					Mean =	13,8
3	Farm-specific herbicide			A B	103	10,0
	MulchCover	6,0	l/ha	A B	204	10,0
	Farm-specific fungicide			C D F H I J L N	306	5,0
	CropCover	2,0	l/ha	C D F H I J L N	403	20,0
					Mean =	11,3
4	Farm-specific herbicide			A B	104	10,0
	MulchCover	6,0	l/ha	A B	205	10,0
	Farm-specific fungicide			C E G I K M	307	20,0
	CropCover	2,0	l/ha	C E G I K M	404	10,0
					Mean =	12,5

6. DISCUSSION AND CONCLUSION

The aim of this study was to gain data about the efficacy of CropCover CC-1000 and MulchCover MC-1000 in potato (cv Innovator) against fungal diseases and weeds in Germany.
The study has been realised according to the GEP principles ("Good Experimental Practice").
CropCover CC-1000 was applied at 2.0 L/ha and MulchCover MC-1000 at 6.0 L/ha in tank mixture with farm-typical herbicides and fungicides with the fungicides being applied in a 7-12 days (treatment 3) or 9-15 days interval (treatment 4), and compared to solo application of these herbicides and fungicides (treatment 2). The farm-typical herbicides were Boxer (prosulfocarb) at 4.0 L/ha, Sencor WG (metribuzin) at 0.5 kg/ha and Gramin (quizalofop-P) at 1.25 L/ha. As fungicides Ridomil Gold MZ (mancozeb + metalaxyl-M) at 2.0 kg/ha, Shirlan (fluazinam) at 0.4 L/ha, Revus Top (difenoconazole + mandipropamid) at 0.6 L/ha, Valis M (mancozeb + valifenalate) at 2.5 kg/ha, Proxanil (cymoxanil+ propamocarb) at 2.0 kg/ha, Revus (mandipropamid) at 0.6 L/ha and Ortiva (azoxystrobin) at 0.5 L/ha were applied.

The trial was set up in May 2015 in a region typical for the production of potatoes in Northern Germany.

Chenopodium album (13 plants/m²) and *Fallopia convolvulus* (7 plants/m²) appeared in the trial area. The untreated infestation level was sufficient.
There were strong infections with *Phytophthora infestans* and Alternaria solani.

Efficacy assessments were done 17 and 31 DA-A (days after application A, first herbicide application) and 27, 36, 42, 54, 60, 67, 71, 78 and 83 DA-C (days after application C, first fungicide application). The trial was harvested 104 DA-C.

Weeds
All treatments achieved 100% control of *Chenopodium album* and *Fallopia convolvulus* 17 and 31 DA-A without significant differences among the treatments.

Phytophthora infestans (PHYTIN)
All treatments prevented infections with *Phytophthora infestans* 27 DA-C, while control plots showed 5,8% pest incidence (PESINC) and 5,0% pest severity (PESSEV). 54 DA-A all treatments reduced PESINC by up to 64,3% and PESSEV by up to 73,2%. 60 DA-A treatments 3 and 4 (addition of CropCover CC-1000 and MulchCover MC) reduced PESINC by 91,3% and 92,7%, respectively, superior to the farm-specific pesticides applied solo (treatment 2). 78 D-A treatments 3 and 4 (addition of CropCover CC-1000 and MulchCover MC) reduced PESINC by 32,5 and 20,0%, superior to the farm-specific pesticides applied solo. 83 DA-C efficacies ranged from 10,0 to 15,0% (table 1).

Table 1: Pest severity (PESSEV) and pest incidence (PESINC) of *Phytophthora infestans* and efficacy (%) of the different treatments.

	60 DA-C (24.08.2015)				83 DA-C (16.09.2015)			
Treatments	**PESINC Leaves (%)**	**Efficacy (%)**	**PESSEV Leaves (%)**	**Efficacy (%)**	**PESINC Leaves (%)**	**Efficacy (%)**	**PESSEV Leaves (%)**	**Efficacy (%)**
1	68,8 a		10,33 a		100 a		50,0 a	
2	10,1 b	85,3	2,46 b	76,1	97,5 a	2,5	45,0 a	10
3	6,0 c	91,3	2,00 b	80,6	90,0 a	10,0	45,0 a	10
4	5,0 c	92,7	2,46 b	76,1	88,8 a	11,3	42,5 a	15

1 = Untreated Control, 2 = Farm-specific herbicides + farm-specific fungicides, 3 = Farm-specific herbicides + MulchCover + Farm-specific fungicides + CropCover at normal interval, 4 = Farm-specifi herbicides + MulchCover + farm-specific fungicides + CropCover at longer interval.

Alternaria solani (ALTESO)

60 and 67 DA-C treatments 3 and 4 (addition of CropCover CC-1000 and MulchCover MC) reduced PESINC by 89,5% and 88,8%, superior to the farm-specific pesticides applied solo. 71 DA-A all treatments reduced PESINC and PESSEV significantly compared to the untreated control with efficacies reaching up to 35,0% and 89,4%, respectively. 78 and 83 DA-A all treatments reduced PESSEV significantly compared to the untreated control with efficacies up to 77,5% (table 2).

Table 2: Pest severity (PESSEV) and pest incidence (PESINC) of *Alternaria solani* and efficacy (%) of the different treatments.

	60 DA-C (24.08.2015)				83 DA-C (16.09.2015)			
Treatments	**PESINC Leaves (%)**	**Efficacy (%)**	**PESSEV Leaves (%)**	**Efficacy (%)**	**PESINC Leaves (%)**	**Efficacy (%)**	**PESSEV Leaves (%)**	**Efficacy (%)**
1	82,2 a		3,97 a		100 a		50,0 a	
2	19,3 b	76,5	1,0 b	74,8	96,2 a	3,8	13,8 b	72,5
3	8,6 c	89,5	1,0 b	74,8	95,4 a	4,6	11,3 b	77,5
4	9,2 c	88,8	1,0 b	74,8	90,9 a	9,1	12,5 b	75,0

1 = Untreated Control, 2 = Farm-specific herbicides + farm-specific fungicides, 3 = Farm-specific herbicides + MulchCover + Farm-specific fungicides + CropCover at normal interval, 4 = Farm-specifi herbicides + MulchCover + farm-specific fungicides + CropCover at longer interval.

Yield

Application of CropCover CC-1000 and MulchCover MC-1000 in tank mix with the farm-specific pesticides at the normal and longer spraying interval (treatments 3 and 4) had a positive effect on yield quantity (71,5 and 72,97 tonnes/ha) compared to the farm-specific pesticides applied solo (61,75 tonnes/ha) and the untreated control (55,0 tonnes/ha). All treatments had a positive effect on the starch content (19,3 and 19,2% compared to the untreated control with 18,0%, table 3).

Table 3: Harvest yield of the different treatments.

	Harvest yield			
Treatments	**Yield (t/ha)**	**% of Control**	**Starch content (%)**	**% of Control**
1	55,00 ^{b}	100,0	18,0 ^{a}	100,0
2	61,75 ^{ab}	112,3	19,3 ^{a}	107,1
3	71,50 ^{a}	130,0	19,2 ^{a}	106,5
4	72,97 ^{a}	132,7	19,2 ^{a}	106,5

1 = Untreated Control, 2 = Farm-specific herbicides + farm-specific fungicides, 3 = Farm-specific herbicides + MulchCover + Farm-specific fungicides + CropCover at normal interval, 4 = Farm-specifi herbicides + MulchCover + farm-specific fungicides + CropCover at longer interval.

No phytotoxic symptoms were visible at any stage of the trial.
No effects on non-target organisms were visible during the trial.

The weather conditions were typical for an average season. However, spring 2015 was slightly dry.
The infestation level of weeds and the disease level of *Phytophthora infestans* and Alternaria solani was sufficient.
The standard reference performed as expected.
Therefore this trial can be considered as valid.

7. CONFIDENTIALITY

All information concerning identity of test substance and plots was handled confidentially. No plot marks or identification of the trial site pointed to the identity of test substance and/or sponsor. No documentation or results will be transferred to unauthorized persons.

8. DISTRIBUTION

Raw Data:

Originals:	Archive, testing facility
Authorized Copies:	Sponsor by request

Report (Extract):

Original:	Sponsor
Authorized Copy:	Archive, Field Research Support

9. WEATHER DATA

FRS164/15 D – 31832 Springe-Bockerode

Station: Barsinghausen-Hohenbostel	Distance to trial site: 22 km

Date	T mean (°C)	T min. (°C)	T max. (°C)	Rel. Humidity (%)	Precipitation (mm)
01.05.2015	8,2	4,3	13,4	70,5	0,0
02.05.2015	9,0	3,5	14,9	62,9	0,0
03.05.2015	12,3	4,9	18,8	73,2	4,5
04.05.2015	16,1	12,7	21,2	72,1	0,8
05.05.2015	17,3	8,6	25,8	69,9	1,6
06.05.2015	13,7	9,1	19,4	58,5	0,3
07.05.2015	10,9	7,5	14,5	75,5	2,5
08.05.2015	13,0	6,5	19,4	71,7	0,0
09.05.2015	14,9	11,0	19,9	66,6	2,6
10.05.2015	11,8	8,5	16,8	63,7	0,0
11.05.2015	17,3	7,0	24,1	53,8	0,0
12.05.2015	18,3	9,7	25,8	56,2	0,0
13.05.2015	13,1	7,4	18,5	60,5	0,0
14.05.2015	9,7	5,7	15,4	69,4	0,0
15.05.2015	10,0	3,1	16,7	71,9	0,0
16.05.2015	9,2	3,7	12,2	83,4	0,3
17.05.2015	10,9	6,3	15,6	62,6	0,0
18.05.2015	14,0	6,2	20,0	58,8	0,1
19.05.2015	11,9	8,3	16,5	62,8	0,0
20.05.2015	10,9	5,5	16,4	64,8	0,0
21.05.2015	11,2	5,7	16,9	65,8	0,0
22.05.2015	14,3	8,3	19,2	61,2	0,0
23.05.2015	13,6	6,2	18,4	71,8	0,0
24.05.2015	12,4	4,3	20,1	71,9	0,2
25.05.2015	12,2	9,9	15,5	70,8	0,7
26.05.2015	10,4	7,0	14,2	74,5	0,2
27.05.2015	11,1	6,7	15,1	69,3	0,0
28.05.2015	13,1	8,5	20,0	66,4	3,4
29.05.2015	13,2	7,1	18,2	62,6	1,7
30.05.2015	9,4	6,2	14,8	79,2	3,9
31.05.2015	14,6	7,5	21,0	65,8	1,3
01.06.2015	13,1	8,9	16,9	65,0	0,0
02.06.2015	16,9	11,1	21,9	63,7	0,3
03.06.2015	15,9	9,2	19,2	66,3	0,0
04.06.2015	15,4	7,5	22,0	63,1	0,0

Date	T mean (°C)	T min. (°C)	T max. (°C)	Rel. Humidity (%)	Precipitation (mm)
05.06.2015	21,8	10,0	31,7	55,5	0,0
06.06.2015	20,2	11,1	24,0	60,3	0,0
07.06.2015	15,2	8,7	22,4	57,5	0,0
08.06.2015	12,6	6,6	18,9	65,3	0,0
09.06.2015	12,5	8,2	17,9	65,9	0,0
10.06.2015	15,3	6,7	23,2	61,5	0,0
11.06.2015	18,0	12,4	24,2	48,1	0,0
12.06.2015	20,1	11,1	27,8	58,8	0,0
13.06.2015	20,0	15,2	26,8	66,6	0,1
14.06.2015	15,4	12,2	18,1	75,5	0,0
15.06.2015	13,5	7,0	19,4	57,3	0,0
16.06.2015	11,0	5,9	16,1	70,4	0,0
17.06.2015	14,3	5,9	20,5	63,7	2,9
18.06.2015	14,8	10,9	20,3	76,0	0,1
19.06.2015	11,7	9,4	15,4	78,6	2,3
20.06.2015	12,3	9,5	16,0	76,8	0,0
21.06.2015	14,3	10,6	19,0	75,7	1,6
22.06.2015	11,6	8,4	14,8	90,5	6,2
23.06.2015	11,7	9,3	15,4	87,6	3,9
24.06.2015	13,4	9,9	18,0	75,0	0,0
25.06.2015	18,2	13,7	23,9	60,8	0,0
26.06.2015	19,5	14,8	23,8	65,0	16,1
27.06.2015	17,9	12,1	22,4	77,0	4,9
28.06.2015	16,6	11,4	22,8	71,5	0,1
29.06.2015	20,7	15,0	25,7	58,5	0,0
30.06.2015	19,5	12,8	26,8	60,4	0,0
01.07.2015	22,1	14,3	29,2	55,5	0,0
02.07.2015	24,7	15,4	32,8	54,7	0,8
03.07.2015	24,4	18,5	31,4	66,3	5,9
04.07.2015	27,6	18,9	36,5	63,0	0,9
05.07.2015	22,7	17,5	28,3	79,6	21,7
06.07.2015	19,0	14,9	24,1	69,4	0,0
07.07.2015	21,7	13,9	30,0	64,3	8,4
08.07.2015	16,6	14,2	19,0	75,7	7,5
09.07.2015	13,3	9,9	17,0	71,8	0,9
10.07.2015	14,4	9,6	19,7	65,8	0,0
11.07.2015	19,0	11,2	27,0	62,9	0,0
12.07.2015	17,2	15,1	20,7	78,8	2,7
13.07.2015	16,3	15,2	18,1	89,1	5,8
14.07.2015	18,2	15,2	22,4	86,4	3,1
15.07.2015	18,9	15,0	23,0	75,0	0,4

Date	T mean (°C)	T min. (°C)	T max. (°C)	Rel. Humidity (%)	Precipitation (mm)
16.07.2015	19,6	15,9	24,8	76,3	0,0
17.07.2015	23,3	15,3	32,3	63,8	1,4
18.07.2015	20,1	14,1	24,7	68,8	1,6
19.07.2015	15,7	13,1	18,9	88,8	12,0
20.07.2015	19,1	13,0	25,3	67,3	4,0
21.07.2015	22,3	18,0	27,1	70,4	0,0
22.07.2015	21,3	15,2	26,3	67,1	0,0
23.07.2015	17,9	12,9	23,0	67,5	0,0
24.07.2015	20,3	13,5	27,0	63,6	6,3
25.07.2015	17,5	12,3	23,5	79,4	9,3
26.07.2015	15,4	11,2	21,4	67,2	2,1
27.07.2015	15,5	12,3	19,3	84,6	3,3
28.07.2015	15,7	13,7	18,9	71,2	0,8
29.07.2015	13,9	11,5	17,5	72,1	4,5
30.07.2015	14,7	11,3	18,9	67,3	0,0
31.07.2015	13,4	8,7	19,0	65,7	0,0
01.08.2015	17,4	9,0	26,8	59,0	0,0
02.08.2015	19,6	14,3	27,1	51,3	0,0
03.08.2015	23,5	13,1	32,2	48,0	0,0
04.08.2015	23,3	15,0	31,0	58,5	2,9
05.08.2015	19,6	14,3	26,5	59,9	0,0
06.08.2015	24,8	13,3	34,0	52,0	0,0
07.08.2015	23,5	16,9	31,2	63,2	4,9
08.08.2015	18,8	13,0	21,8	88,2	1,1
09.08.2015	19,3	10,8	27,3	71,5	0,0
10.08.2015	22,9	16,8	30,7	63,2	6,3
11.08.2015	19,7	17,1	23,4	87,6	0,0
12.08.2015	19,7	17,2	23,5	85,2	0,0
13.08.2015	22,4	16,1	29,3	68,3	0,2
14.08.2015	23,0	18,0	28,6	73,0	0,0
15.08.2015	22,4	17,9	27,5	71,0	0,1
16.08.2015	19,6	17,7	22,3	89,3	21,3
17.08.2015	16,5	14,5	17,9	95,5	23,9
18.08.2015	14,8	13,8	16,7	90,0	3,1
19.08.2015	16,2	12,6	20,7	75,8	0,0
20.08.2015	17,8	12,9	23,7	75,8	0,0
21.08.2015	18,8	12,4	25,8	65,7	0,0
22.08.2015	19,5	12,2	26,7	52,3	0,0
23.08.2015	18,5	11,7	24,8	56,0	1,5
24.08.2015	19,3	14,4	25,3	73,3	1,0
25.08.2015	17,2	14,4	20,5	68,0	1,1

Date	T mean (°C)	T min. (°C)	T max. (°C)	Rel. Humidity (%)	Precipitation (mm)
26.08.2015	21,2	15,1	26,8	55,7	0,0
27.08.2015	18,5	13,3	22,4	72,3	16,9
28.08.2015	15,7	12,5	20,5	79,2	0,0
29.08.2015	18,0	11,1	25,0	73,1	0,0
30.08.2015	22,4	15,7	30,9	82,3	7,2
31.08.2015	25,0	18,5	33,2	68,0	0,0
01.09.2015	17,2	12,7	21,7	85,8	7,1
02.09.2015	14,7	11,3	19,8	73,2	0,0
03.09.2015	13,7	10,3	19,7	77,7	1,3
04.09.2015	14,0	11,8	18,3	69,0	1,2
05.09.2015	12,6	10,4	15,4	85,5	5,8
06.09.2015	12,1	10,2	16,7	82,0	7,4
07.09.2015	14,3	11,5	19,2	80,1	0,0
08.09.2015	14,0	11,5	18,7	80,4	0,0
09.09.2015	13,4	8,7	19,0	75,5	0,0
10.09.2015	12,8	7,1	19,9	77,9	0,0
11.09.2015	12,7	8,0	18,8	83,5	0,0
12.09.2015	14,4	9,3	19,8	87,9	3,7
13.09.2015	17,2	14,2	20,5	89,7	1,7
14.09.2015	16,6	12,9	21,2	85,3	4,8
15.09.2015	13,6	10,2	17,1	72,2	0,2
16.09.2015	15,4	11,4	19,0	82,5	2,6
17.09.2015	16,3	12,1	18,4	77,1	2,6
18.09.2015	14,8	11,6	20,1	74,4	0,3
19.09.2015	13,3	11,2	15,3	87,2	3,5
20.09.2015	12,6	10,9	15,6	88,1	5,2
21.09.2015	13,7	12,0	18,1	81,0	1,4
22.09.2015	13,1	10,1	16,7	81,7	4,4
23.09.2015	11,7	9,6	14,1	88,4	6,9
24.09.2015	14,2	11,0	17,2	76,3	0,0
25.09.2015	13,1	9,6	18,1	77,8	0,0
26.09.2015	12,1	8,2	17,6	80,9	0,0
27.09.2015	10,8	6,6	17,0	83,3	0,0
28.09.2015	10,7	6,9	17,6	83,3	0,0
29.09.2015	10,2	5,3	17,3	81,3	0,0
30.09.2015	9,4	4,8	16,3	84,3	0,0
01.10.2015	9,4	4,2	16,4	74,5	0,0
02.10.2015	10,3	4,1	18,2	72,3	0,0
03.10.2015	12,1	4,5	19,9	76,8	0,0

Date	T mean (°C)	T min. (°C)	T max. (°C)	Rel. Humidity (%)	Precipitation (mm)
04.10.2015	14,0	10,0	18,5	75,5	0,0
05.10.2015	13,7	9,6	19,4	83,3	0,8
06.10.2015	14,0	11,0	18,0	91,2	7,8
07.10.2015	15,8	13,9	18,3	89,2	0,3

Shading = applications
Source: Deutscher Wetterdienst

10. GEP-CERTIFICATE

Anerkennungsbescheinigung

Die Versuchseinrichtung	Field Research Support
mit Hauptsitz in	Potts Kamp 8
	31515 Wunstorf
ist auf Antrag vom	25.11.2010
und durchgeführter Besichtigung vom	4.04.2011

durch Frau Goßswinth Warnecke-Busch, Pflanzenschutzamt, LWK Niedersachsen

vom Pflanzenschutzamt der Landwirtschaftskammer Niedersachsen **am** 4.04.2011

amtlich anerkannt worden im Sinne des § 1c Abs. 5 der Pflanzenschutzmittelverordnung.

Diese Bescheinigung ist gültig bis April 2016

Recognition Certificate

The testing facility with headquarters in	Field Research Support 31515 Wunstorf, Potts Kamp 8

has been officially recognized under paragraph (5) of Article 1c of the Plant Protection Products Ordinance following its application dated 25th of November 2010

and pre-inspection of 4th of Aprilr 2011

by Mrs Goßswinth Warnecke-Busch, Pflanzenschutzamt, LWK Niedersachsen

from the Pflanzenschutzamt der Landwirtschaftskammer Niedersachsen **on** 4st of April 2011

This certificate is valid until April 2016

Hannover, 6.04.2011

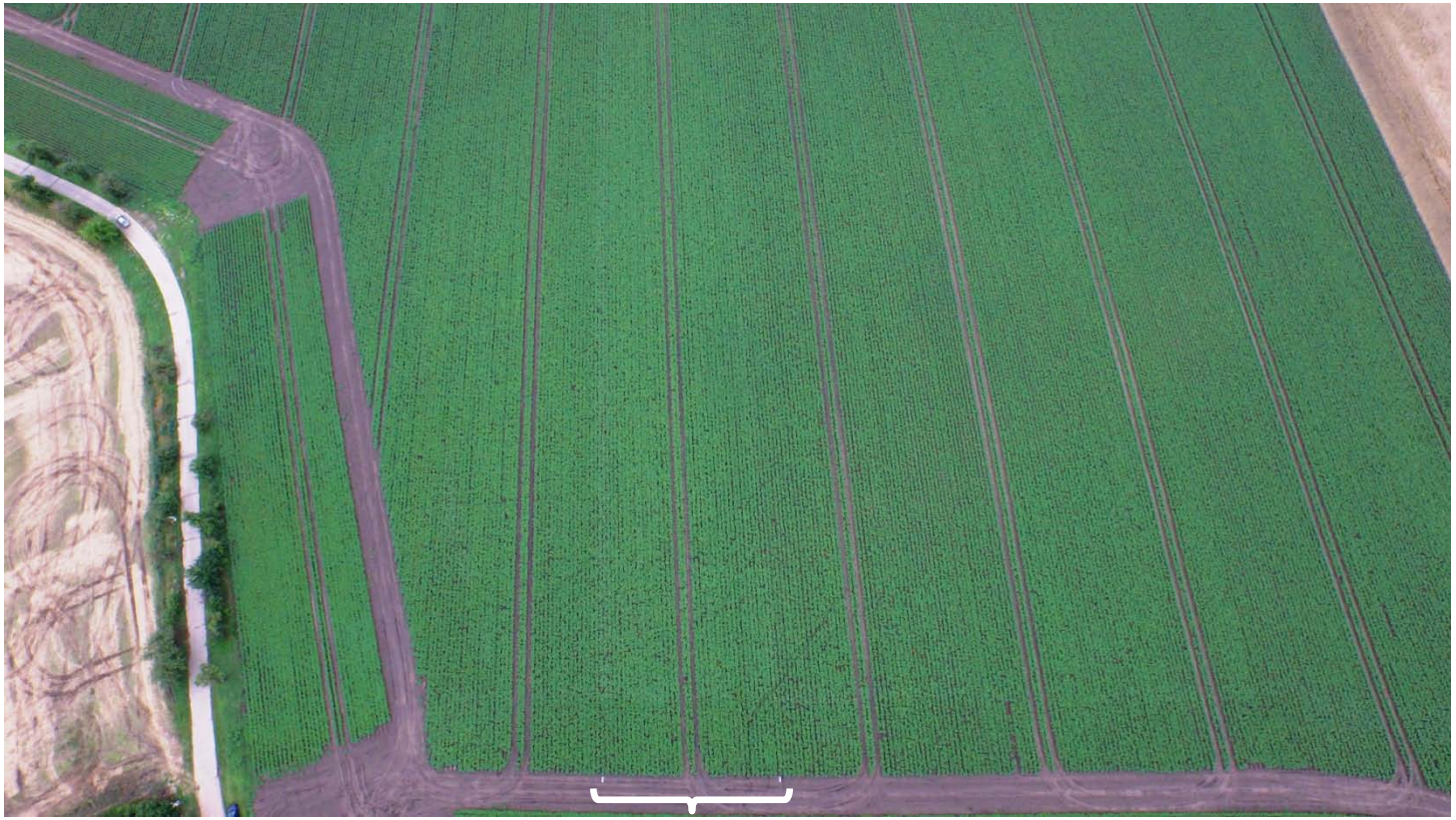
2015 Exakt-Versuche in der Kartoffel
Effizienznachweis bei Fungizidanwendungen mit CropCover CC-1000
Versuchsdurchführung amynova / Landwirtschaftlicher Betrieb

Bernhard Sack

15.12.2015

Versuchsstandort / Sorte

- Roitzsch
- Agria



Spritzbelag

nach lediglich 12 mm Niederschlag

ohne CropCover

mit CropCover

Spritzbelag

nach insgesamt 18 mm Niederschlag

ohne CropCover

mit CropCover

Versuchsanlage

VGL	A 16.06.15	B 24.06.15	C 29.06.15	D 12.07.15	E 22.07.15	F 28.07.15
1	Tridex DG 2,0	Tridex DG 2,0	Tridex DG 2,0	Tridex DG 2,0	Tridex DG 2,0	Tridex DG 2,0
2	Tridex DG 2,0 CC-1000 2,0	Tridex DG 2,0 CC-1000 2,0	Tridex DG 2,0 CC-1000 2,0	Tridex DG 2,0 CC-1000 2,0	Tridex DG 2,0 CC-1000 2,0	Tridex DG 2,0 CC-1000 2,0

Versuchsergebnis - Stärkeertrag

VGL	Ertrag		Stärkegehalt	
	t / ha	relativ %	%	relativ
1	31,1	100,0	13,0	100,0
2	35,0	112,5	13,9	106,9

Versuchseinschätzung

- Signifikanter Mehrertrag in den CropCover behandelten Varianten mit höherem Stärkegehalt
- bessere Wirkstoffverfügbarkeit durch verbesserte Haftung spielt eine äußerst wichtige Rolle
- Einsatz von CropCover CC-1000 wirtschaftlich sinnvoll

Vielen Dank für Ihre Aufmerksamkeit!

amynova polymers GmbH
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Areal A, OT Wolfen
Kunstseidestraße 6
06766 Bitterfeld-Wolfen

Tel.: +49 (0) 3494 637336
Fax: +49 (0) 3494 638343
bs@amynova.com

GF: Bernhard Sack

- Anlagen: Versuchsrohdaten

Proberodung Kartoffeln

Spritzversuch mit CROPCOVER

Erntejahr: 2015

[redacted]

Datum	Schlag	Sorte/ Behandlung	Fläche (m²)	Stauden je m²	Stängel je Staude	Knollen je Staude	Ertrag (to/ha)	Ertragsanteil der Sortierung (in %) <40 mm	40-50 mm	50-65 mm	>65 mm	Stärke (%)
02.10.15	Wendtmühle	ohne CropCover Wdh. 1	4,313	4,07			32,8					12,2
"	"	" Wdh. 2	5,363	3,52			25,7					13,4
"	"	" Wdh. 3	4,313	4,07			33,8					12,4
"	"	" Wdh. 4	4,350	4,04			31,9					14,0
				3,33			31,1					13,0
02.10.15	Wendtmühle	mit CropCover Wdh. 1	4,838	4,13			40,3					12,9
"	"	" Wdh. 2	5,325	3,76			35,3					13,8
"	"	" Wdh. 3	5,025	3,38			25,5					14,6
"	"	" Wdh. 4	4,688	4,27			38,2					14,3
				4,04			35,0					13,3
Differenz "mit CROP COVER" gegenüber "ohne CROP COVER"							+ 3,9	(+12,5%)				+ 0,9

Der mit CropCover behandelte Streifen zeigte mehr Krautwachstum (Kraut höher, vitaler) [nach Aussage der Spritzenfahrer]

[redacted]

Spritzversuch mit CROP COVER in Kartoffeln 2015

Feldstück: Wendtmühle (sandiger Lehm, Ø 70BP)

Behandlungsfläche: ca. 4,4 ha (1.460 m x 30 m)

Sorte: AGRIA

Anwendungen: Crop Cover wurde in Verbindung mit den anstehenden Krautfäulebehandlungen angewendet (Fungizid: vorwiegend Tridex DG)
Es erfolgten insgesamt 6 Spritzungen zu folgenden Terminen:

→ 16.06.2015	EC 61
→ 24.06.2015	EC 65
→ 29.06.2015	EC 65
→ 12.07.2015	EC 71
→ 22.07.2015	EC 81
→ 28.07.2015	EC 81

Aufwandmengen:

Wasser	300 l/ha
CROP COVER	2,00 l/ha
Fungizide	zugelassene Aufwandmengen

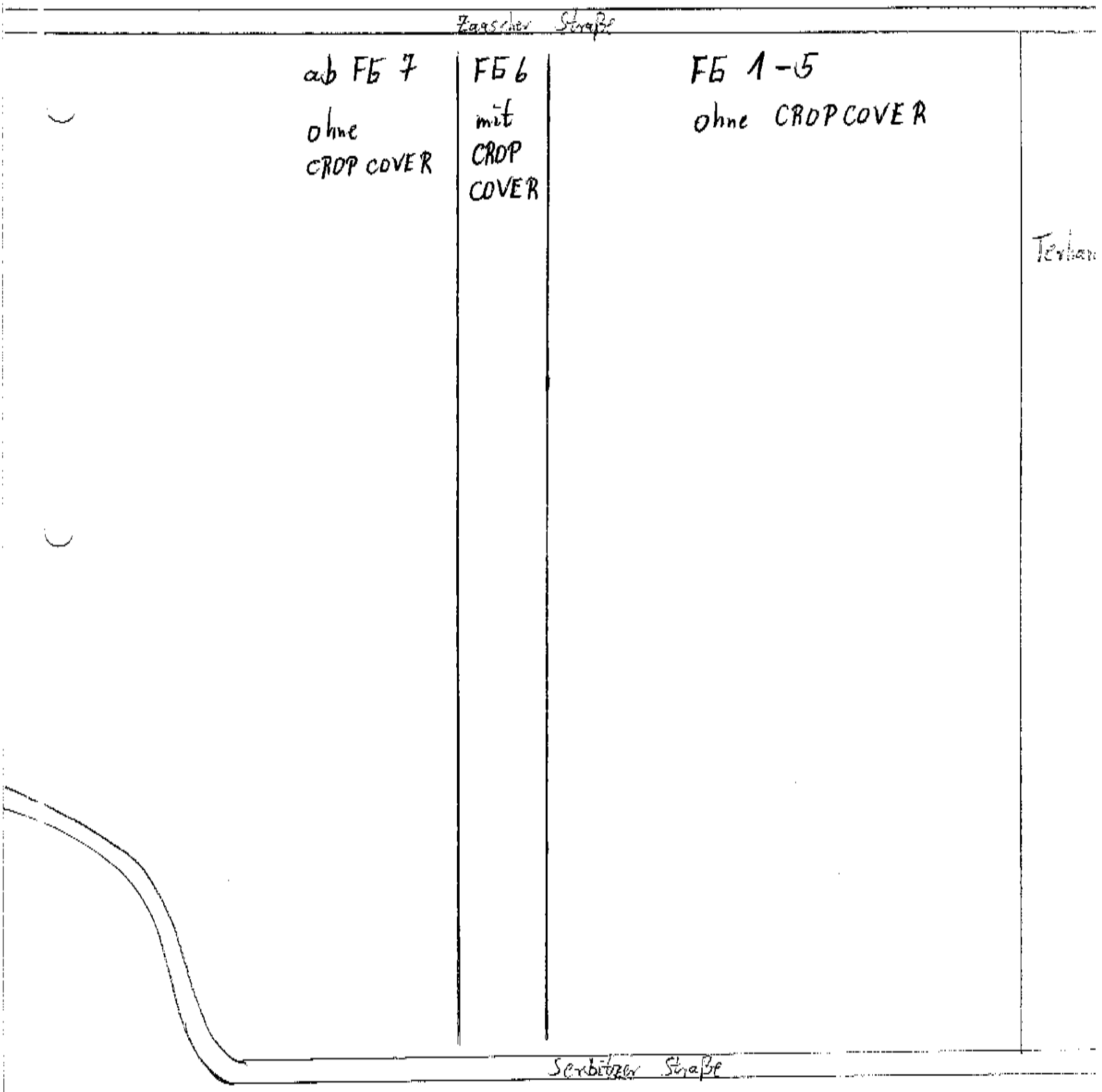
Sikkation des Bestandes: am 22.08.2015

Ernte: am 08.10.2015

[redacted]

Spritzversuch mit CROP COVER in Kartoffeln 2015

Feldstück: Wendtmühle



[redacted]

Flächenrodungsergebnisse zum Spritzversuch mit Crop Cover

Erntedatum: 08.10.2015

Ernteflächе: von jeder Variante wurden 2 Fuhren à 4 Reihen getrennt gewogen.
Fläche = 1,460 m × 3,0 m = 0,438 ha

Schmutzabzug: Bei jeder Fuhre wurde ein konstanter Erdabzug in Höhe von 4,5 to vorgenommen.

Ertragsergebnis:

ohne CROP COVER → Fuhre 1: 34,4 to/ha
→ Fuhre 2: 34,0 to/ha
Ø 34,2 to/ha

mit CROP COVER → Fuhre 1: 35,7 to/ha
→ Fuhre 2: 33,5 to/ha
Ø 37,6 to/ha

Fazit: Die Ertragssteigerung durch CROP COVER beträgt 3,4 to/ha (+10 %) gegenüber der unbehandelten Variante.