APPLICATIONS

SOIL INFORMATION

TEXTURE: SIX
PH: 6.0
%OM: 3.6
PREV.CROP: GLXMA - Soybean
%RESIDUE: 0
PLOT WIDTH: 7.5 X 30 FEET
PLOT AREA: 225 FEET

TRIAL INFORMATION

DESIGN: RCB
REPS: 3

APPL. NUMBER	01	02	UNIT
TIMINGS	09	11	
TYPE	LIQUID MI	LIQUID MI	
APPLICATION DATE	06/12/20	06/24/20	AME
TIME - BEGIN	09:00	13:30	24H
TIME - END	09:10	13:53	24H
AIR TEMPERATURE	79	74	F
% REL.HUMIDITY	47	56	
WIND DIRECTION	NORTHEAST	WEST	
WIND SPEED	3.0	5.0	M/H
CLOUD COVER	CLEAR-0%	PAR.CLOUD	
DEW	TO BE SEL	NO	
SOIL MOISTURE	DRY/MOIST	MOIST/MOI	
SOIL CONDITION	TO BE SEL	TO BE SEL	
SOIL TEMP/DEPTH	68/4.00	74/4.00	F/IN
METHOD	SPRAY	SPRAY	
EQUIPMENT	BACKPACK/	BACKPACK/	
PROPELLANT	COMPRESSE	COMPRESSE	
PLACEMENT	BROADCAST	BROADCAST	
NOZZLE	FLATFAN	FLATFAN	
NOZZLE DESCRIPTION			
NOZZLE VOLUME	0.00	0.00	GPM
NOZZLE NUMBER	5	5	
NOZZLE SPACING	18.000	18.000	IN
SCREEN SIZE			
SCREEN SZ DESC	N/A	N/A	
SWATH WIDTH	7.5	7.5	FT
BOOM HEIGHT	20.0	20.0	IN
SPEED	3.00	3.00	M/H
MIX SIZE	0.330	0.330	
MIX SIZE UNIT	GAL	GAL	
SPRAY VOLUME	20.00	20.00	
SPRAY VOLUME UNIT	GPA	GPA	
PRESSURE	30.00	30.00	PSI
DILUENT	WATER	WATER	
INC. DATE			AME
INC. START			24H
INC. END			24H
INC. DEPTH			IN
INC. EQUIPMENT	TO BE SEL	TO BE SEL	
FOLIAGE HEIGHT			FT
FOLIAGE WIDTH			FT
ROW WIDTH			FT
SPRAY VOL LWA/TRV			
S VOL LWA/TRV UNIT			
LEAF WALL AREA			M2H
TREE ROW VOLUME			M3H
SPECIE AND STAGE	DEN / STG MIN / MAX	DEN / STG MIN / MAX	
CROP *			
P, Dent corn		---/12	
NK1082-5222A-EZ1		4.00/4.00	IN
(PLANTED) 06/11/2020		13 DAP	
PEST *			
P, Amaranth, Palmer		---/14	
		0.50/1.00	IN
P, Anoda, spurred		---/10	
		0.25/1.50	IN
P, Tall morning glo		---/10	
		0.25/1.00	IN

*** CONTINUE

SPECIE AND STAGE	DEN / STG MIN / MAX	DEN / STG MIN / MAX	
PEST *			
P, Giant foxtail		---/12	
		0.25/3.00	IN

*** TIMING CODES**
09 = --- / PREEMERGENCE
11 = --- / EPOST

*** STAGE CODE**
10 = 1ST LEAF EMERGED; COTYLEDONS UNFOLDED
12 = 2 LEAVES UNFOLDED
12 = 2 LEAVES UNFOLDED
14 = 4TH TRUE LEAVES/LEAF PAIRS/WHORLS UNFOLDED

TITLE: Belchim BCP1016H,TOUGH 5EC and Shieldex for control of Glyphosate Resistant Palmer Amaranth in Corn. R-3N
CREATED: 04/27/2020 **REVISED:** 10/02/2020 **COMPLETED:** N
PROJECT TYPE: HERBICIDE
LOCATION: URBANA **RESEARCHED BY:** UNIV. OF ILL
DESIGN: RANDOMIZED COMPLETE BLOCK DESIGN
PLOT SIZE: 7.50 FT **WIDE X** 30.00 FT **LONG**
PLOT AREA: 225.00 SFT
REPS: 03

TRT NUM	TREATMENT COMPONENT	DOSAGE RATE	UNIT	TM	ZEAMD CON % 07/01/20	SETFA CON % 07/01/20	PHBPU CON % 07/01/20	ANVCR CON % 07/01/20	AMAPA CON % 07/01/20	ZEAMD CON % 07/07/20
1A	»DUAL II MAGNUM	1.33	PMA	9	0	85	78	77	98	0
2A	»DUAL II MAGNUM	1.33	PMA	9	2	90	95	93	99	0
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»SHIELDEX 3.33S	1.35	ZMA	11						
D	»LIQUID AMS	2.50	PMV	11						
3A	»DUAL II MAGNUM	1.33	PMA	9	0	92	95	92	99	0
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»TOUGH 5EC	8.00	ZMA	11						
D	»LIQUID AMS	2.50	PMV	11						
4A	»DUAL II MAGNUM	1.33	PMA	9	9	92	92	91	99	3
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»SHIELDEX 3.33S	1.35	ZMA	11						
D	»TOUGH 5EC	8.00	ZMA	11						
E	»LIQUID AMS	2.50	PMV	11						
5A	»DUAL II MAGNUM	1.33	PMA	9	0	91	93	95	99	0
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»CALLISTO 4SC	3.00	ZMA	11						
D	»LIQUID AMS	2.50	PMV	11						
6A	»DUAL II MAGNUM	1.33	PMA	9	2	91	97	95	99	0
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»CALLISTO 4SC	3.00	ZMA	11						
D	»TOUGH 5EC	8.00	ZMA	11						
E	»LIQUID AMS	2.50	PMV	11						
7A	»DUAL II MAGNUM	1.33	PMA	9	0	92	96	93	99	0
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»BCP1016H	16.00	ZMA	11						
D	»LIQUID AMS	2.50	PMV	11						
8A	»DUAL II MAGNUM	1.33	PMA	9	2	94	96	98	99	0
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»CALLISTO 4SC	3.00	ZMA	11						
D	AATREX 4L	2.40	PMA	11						
E	»TOUGH 5EC	8.00	ZMA	11						
F	»LIQUID AMS	2.50	PMV	11						
9A	»DUAL II MAGNUM	1.33	PMA	9	3	93	98	95	99	0
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	AATREX 4L	2.40	PMA	11						
D	»BCP1016H	16.00	ZMA	11						
E	»LIQUID AMS	2.50	PMV	11						
10A	»DUAL II MAGNUM	1.33	PMA	9	4	93	98	96	99	1
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	AATREX 4L	2.40	PMA	11						
D	»SHIELDEX 3.33S	1.35	ZMA	11						
E	»TOUGH 5EC	8.00	ZMA	11						
F	»LIQUID AMS	2.50	PMV	11						
	LSD (0.05)				1.3	3.0	3.8	6.1	1.3	0.4
	STANDARD DEVIATION				0.6	1.4	1.8	2.9	0.6	0.2

TITLE: Belchim BCP1016H,TOUGH 5EC and Shieldex for control of Glyphosate Resistant Palmer Amaranth in Corn. R-3N
CREATED: 04/27/2020 **REVISED:** 10/02/2020 **COMPLETED:** N
PROJECT TYPE: HERBICIDE
LOCATION: URBANA **RESEARCHED BY:** UNIV. OF ILL
DESIGN: RANDOMIZED COMPLETE BLOCK DESIGN
PLOT SIZE: 7.50 FT **WIDE X** 30.00 FT **LONG**
PLOT AREA: 225.00 SFT
REPS: 03

TRT NUM	TREATMENT COMPONENT	DOSAGE RATE	UNIT	TM	SETFA CON % 07/07/20	PHBPU CON % 07/07/20	ANVCR CON % 07/07/20	AMAPA CON % 07/07/20	ZEAMD CON % 07/22/20	SETFA CON % 07/22/20
1A	DUAL II MAGNUM	1.33	PMA	9	80	75	70	85	0	60
2A	DUAL II MAGNUM	1.33	PMA	9	87	95	90	97	0	70
B	RNDUP POWERMAX	32.00	ZMA	11						
C	SHIELDEX 3.33S	1.35	ZMA	11						
D	LIQUID AMS	2.50	PMV	11						
3A	DUAL II MAGNUM	1.33	PMA	9	85	94	90	90	0	67
B	RNDUP POWERMAX	32.00	ZMA	11						
C	TOUGH 5EC	8.00	ZMA	11						
D	LIQUID AMS	2.50	PMV	11						
4A	DUAL II MAGNUM	1.33	PMA	9	88	90	90	98	0	73
B	RNDUP POWERMAX	32.00	ZMA	11						
C	SHIELDEX 3.33S	1.35	ZMA	11						
D	TOUGH 5EC	8.00	ZMA	11						
E	LIQUID AMS	2.50	PMV	11						
5A	DUAL II MAGNUM	1.33	PMA	9	86	92	96	98	0	73
B	RNDUP POWERMAX	32.00	ZMA	11						
C	CALLISTO 4SC	3.00	ZMA	11						
D	LIQUID AMS	2.50	PMV	11						
6A	DUAL II MAGNUM	1.33	PMA	9	84	96	93	99	0	67
B	RNDUP POWERMAX	32.00	ZMA	11						
C	CALLISTO 4SC	3.00	ZMA	11						
D	TOUGH 5EC	8.00	ZMA	11						
E	LIQUID AMS	2.50	PMV	11						
7A	DUAL II MAGNUM	1.33	PMA	9	86	95	94	99	0	72
B	RNDUP POWERMAX	32.00	ZMA	11						
C	BCP1016H	16.00	ZMA	11						
D	LIQUID AMS	2.50	PMV	11						
8A	DUAL II MAGNUM	1.33	PMA	9	88	95	96	99	0	75
B	RNDUP POWERMAX	32.00	ZMA	11						
C	CALLISTO 4SC	3.00	ZMA	11						
D	AATREX 4L	2.40	PMA	11						
E	TOUGH 5EC	8.00	ZMA	11						
F	LIQUID AMS	2.50	PMV	11						
9A	DUAL II MAGNUM	1.33	PMA	9	89	96	95	99	0	75
B	RNDUP POWERMAX	32.00	ZMA	11						
C	AATREX 4L	2.40	PMA	11						
D	BCP1016H	16.00	ZMA	11						
E	LIQUID AMS	2.50	PMV	11						
10A	DUAL II MAGNUM	1.33	PMA	9	90	98	95	99	0	75
B	RNDUP POWERMAX	32.00	ZMA	11						
C	AATREX 4L	2.40	PMA	11						
D	SHIELDEX 3.33S	1.35	ZMA	11						
E	TOUGH 5EC	8.00	ZMA	11						
F	LIQUID AMS	2.50	PMV	11						
	LSD (0.05)				3.4	5.5	9.0	3.1	0.0	5.0
	STANDARD DEVIATION				1.6	2.6	4.3	1.5	0.0	2.4

TITLE: Belchim BCP1016H,TOUGH 5EC and Shieldex for control of Glyphosate Resistant Palmer Amaranth in Corn. R-3N
CREATED: 04/27/2020 **REVISED:** 10/02/2020 **COMPLETED:** N
PROJECT TYPE: HERBICIDE
LOCATION: URBANA **RESEARCHED BY:** UNIV. OF ILL
DESIGN: RANDOMIZED COMPLETE BLOCK DESIGN
PLOT SIZE: 7.50 FT **WIDE X** 30.00 FT **LONG**
PLOT AREA: 225.00 SFT
REPS: 03

TRT NUM	TREATMENT COMPONENT	DOSAGE RATE	UNIT	TM	PHBPU CON % 07/22/20	ANVCR CON % 07/22/20	AMAPA CON % 07/22/20	ZEAMD CON % 08/05/20	SETFA CON % 08/05/20	PHBPU CON % 08/05/20
1A	»DUAL II MAGNUM	1.33	PMA	9	67	60	75	0	52	58
2A	»DUAL II MAGNUM	1.33	PMA	9	90	88	93	0	63	87
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»SHIELDEX 3.33S	1.35	ZMA	11						
D	»LIQUID AMS	2.50	PMV	11						
3A	»DUAL II MAGNUM	1.33	PMA	9	93	85	87	0	60	90
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»TOUGH 5EC	8.00	ZMA	11						
D	»LIQUID AMS	2.50	PMV	11						
4A	»DUAL II MAGNUM	1.33	PMA	9	87	83	96	0	65	85
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»SHIELDEX 3.33S	1.35	ZMA	11						
D	»TOUGH 5EC	8.00	ZMA	11						
E	»LIQUID AMS	2.50	PMV	11						
5A	»DUAL II MAGNUM	1.33	PMA	9	88	90	96	0	63	85
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»CALLISTO 4SC	3.00	ZMA	11						
D	»LIQUID AMS	2.50	PMV	11						
6A	»DUAL II MAGNUM	1.33	PMA	9	96	88	99	0	58	94
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»CALLISTO 4SC	3.00	ZMA	11						
D	»TOUGH 5EC	8.00	ZMA	11						
E	»LIQUID AMS	2.50	PMV	11						
7A	»DUAL II MAGNUM	1.33	PMA	9	90	85	98	0	65	88
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»BCP1016H	16.00	ZMA	11						
D	»LIQUID AMS	2.50	PMV	11						
8A	»DUAL II MAGNUM	1.33	PMA	9	93	92	99	0	67	92
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	»CALLISTO 4SC	3.00	ZMA	11						
D	AATREX 4L	2.40	PMA	11						
E	»TOUGH 5EC	8.00	ZMA	11						
F	»LIQUID AMS	2.50	PMV	11						
9A	»DUAL II MAGNUM	1.33	PMA	9	93	88	99	0	67	92
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	AATREX 4L	2.40	PMA	11						
D	»BCP1016H	16.00	ZMA	11						
E	»LIQUID AMS	2.50	PMV	11						
10A	»DUAL II MAGNUM	1.33	PMA	9	96	83	99	0	65	95
B	»RNDUP POWERMAX	32.00	ZMA	11						
C	AATREX 4L	2.40	PMA	11						
D	»SHIELDEX 3.33S	1.35	ZMA	11						
E	»TOUGH 5EC	8.00	ZMA	11						
F	»LIQUID AMS	2.50	PMV	11						
	LSD (0.05)				6.0	9.7	5.0	0.0	6.3	9.6
	STANDARD DEVIATION				2.9	4.6	2.4	0.0	3.0	4.6

DATA MEAN

TITLE: Belchim BCP1016H,TOUGH 5EC and Shieldex for control of Glyphosate Resistant Palmer Amaranth in Corn. R-3N
CREATED: 04/27/2020 **REVISED:** 10/02/2020 **COMPLETED:** N
PROJECT TYPE: HERBICIDE
LOCATION: URBANA **RESEARCHED BY:** UNIV. OF ILL
DESIGN: RANDOMIZED COMPLETE BLOCK DESIGN
PLOT SIZE: 7.50 FT **WIDE X** 30.00 FT **LONG**
PLOT AREA: 225.00 SFT
REPS: 03

TRT NUM	TREATMENT COMPONENT	DOSAGE RATE	UNIT	TM	ANVCR CON % 08/05/20	AMAPA CON % 08/05/20
1A	»DUAL II MAGNUM	1.33	PMA	9	58	67
2A	»DUAL II MAGNUM	1.33	PMA	9	86	91
B	»RNDUP POWERMAX	32.00	ZMA	11		
C	»SHIELDEX 3.33S	1.35	ZMA	11		
D	»LIQUID AMS	2.50	PMV	11		
3A	»DUAL II MAGNUM	1.33	PMA	9	82	78
B	»RNDUP POWERMAX	32.00	ZMA	11		
C	»TOUGH 5EC	8.00	ZMA	11		
D	»LIQUID AMS	2.50	PMV	11		
4A	»DUAL II MAGNUM	1.33	PMA	9	80	95
B	»RNDUP POWERMAX	32.00	ZMA	11		
C	»SHIELDEX 3.33S	1.35	ZMA	11		
D	»TOUGH 5EC	8.00	ZMA	11		
E	»LIQUID AMS	2.50	PMV	11		
5A	»DUAL II MAGNUM	1.33	PMA	9	88	95
B	»RNDUP POWERMAX	32.00	ZMA	11		
C	»CALLISTO 4SC	3.00	ZMA	11		
D	»LIQUID AMS	2.50	PMV	11		
6A	»DUAL II MAGNUM	1.33	PMA	9	85	99
B	»RNDUP POWERMAX	32.00	ZMA	11		
C	»CALLISTO 4SC	3.00	ZMA	11		
D	»TOUGH 5EC	8.00	ZMA	11		
E	»LIQUID AMS	2.50	PMV	11		
7A	»DUAL II MAGNUM	1.33	PMA	9	83	98
B	»RNDUP POWERMAX	32.00	ZMA	11		
C	»BCP1016H	16.00	ZMA	11		
D	»LIQUID AMS	2.50	PMV	11		
8A	»DUAL II MAGNUM	1.33	PMA	9	88	99
B	»RNDUP POWERMAX	32.00	ZMA	11		
C	»CALLISTO 4SC	3.00	ZMA	11		
D	AATREX 4L	2.40	PMA	11		
E	»TOUGH 5EC	8.00	ZMA	11		
F	»LIQUID AMS	2.50	PMV	11		
9A	»DUAL II MAGNUM	1.33	PMA	9	85	99
B	»RNDUP POWERMAX	32.00	ZMA	11		
C	AATREX 4L	2.40	PMA	11		
D	»BCP1016H	16.00	ZMA	11		
E	»LIQUID AMS	2.50	PMV	11		
10A	»DUAL II MAGNUM	1.33	PMA	9	80	98
B	»RNDUP POWERMAX	32.00	ZMA	11		
C	AATREX 4L	2.40	PMA	11		
D	»SHIELDEX 3.33S	1.35	ZMA	11		
E	»TOUGH 5EC	8.00	ZMA	11		
F	»LIQUID AMS	2.50	PMV	11		
	LSD (0.05)				10.6	7.4
	STANDARD DEVIATION				5.0	3.5

» **= SUPPLEMENTAL CHEMICAL**

*** TIMING CODES**
09 = --- / PREEMERGENCE 06/12/2020(1)
11 = --- / EPOST 06/24/2020(2)

H#	CUSTOM#1	CUSTOM#2	EV.DATE	S#	TYP	SPECIE	STAGE	RAW	PRT	SYM	MTH	CNF	BASIS	C.M	CTRT	SS	NOTE
001	ZEAMD	CON %	07/01/2020	01	P	ZEAMD		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N

TITLE: Belchim BCP1016H,TOUGH 5EC and Shieldex for control of Glyphosate Resistant Palmer Amaranth in Corn. R-3N

H#	CUSTOM#1	CUSTOM#2	EV.DATE	S#	TYP	SPECIE	STAGE	RAW	PRT	SYM	MTH	CNF	BASIS	C.M	CTRT	SS	NOTE
002	SETFA	CON %	07/01/2020	02	P	SETFA		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
003	PHBPU	CON %	07/01/2020	03	P	PHBPU		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
004	ANVCR	CON %	07/01/2020	04	P	ANVCR		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
005	AMAPA	CON %	07/01/2020	05	P	AMAPA		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
006	ZEAMD	CON %	07/07/2020	01	P	ZEAMD		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
007	SETFA	CON %	07/07/2020	02	P	SETFA		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
008	PHBPU	CON %	07/07/2020	03	P	PHBPU		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
009	ANVCR	CON %	07/07/2020	04	P	ANVCR		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
010	AMAPA	CON %	07/07/2020	05	P	AMAPA		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
011	ZEAMD	CON %	07/22/2020	01	P	ZEAMD		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
012	SETFA	CON %	07/22/2020	02	P	SETFA		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
013	PHBPU	CON %	07/22/2020	03	P	PHBPU		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
014	ANVCR	CON %	07/22/2020	04	P	ANVCR		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
015	AMAPA	CON %	07/22/2020	05	P	AMAPA		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
016	ZEAMD	CON %	08/05/2020	01	P	ZEAMD		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
017	SETFA	CON %	08/05/2020	02	P	SETFA		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
018	PHBPU	CON %	08/05/2020	03	P	PHBPU		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
019	ANVCR	CON %	08/05/2020	04	P	ANVCR		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N
020	AMAPA	CON %	08/05/2020	05	P	AMAPA		RAW	ALL	CON	%	---	1.00 PL	NO	0001	0	N

*** SPECIES COMMON NAME - VARIETY/SPECIE INFO (IF APPLICABLE)**
01 = NK1082-5222A-EZ1