

**Disclaimer:**

This document is based on the results from an individual trial and may contain experimental use patterns that are currently off-label. **This document does not provide any interpretation and should not be taken as an endorsement of any unregistered use pattern.**

Professional advice should be sought for specific recommendations to ensure access to the most up to date information and knowledge.

**Any product referred to in this document must be used strictly as directed, and in accordance with all label or permit instructions. Always consult the label prior to use.**

## Citric Acid as an Adjuvant for Control of Summer Grasses in Fallow 2015-16

Trial ID: DK1501

Location: Goondiwindi  
Investigator: Denielle Kilby

Trial Year: 2015

Application Date:	7/12/2015
Weed Size Average:	5 leaf
Weed Size Range:	6 tillers - budding

Pest Scientific Name				<i>Echinochloa colona</i>	<i>Urochloa panicoides</i>
Pest Name				Awnless Barnyard Grass	Liverseed Grass
Situation				Fallow	Fallow
Rating Date				22/12/2015	22/12/2015
Rating Type				PHYNEC	PHYNEC
Rating Unit				%	%
Treatment-Evaluation Interval				15 DAA	15 DAA
ARM Action Codes				AL	ER3
Trt No.	Treatment	Product Rate	Appl. Description		
1	Glyphosate CT	1000ml/ha	Rain Water	23.9-	67.5-
2	Glyphosate CT Citric Acid	1000ml/ha	Rain Water To Match pH Trt 4	7.8-	34.4-
3	Glyphosate CT Citric Acid	1000ml/ha 2.1g/l	Rain Water To pH 4	14.9-	39.4-
4	Glyphosate CT LI-700	1000ml/ha 2.5ml/l	Rain Water	19.6-	45.0-
5	Glyphosate CT	1000ml/ha	Bore Water	12.1-	45.0-
6	Glyphosate CT Citric Acid	1000ml/ha	Bore Water To Match pH Trt 8	15.9-	45.0-
7	Glyphosate CT Citric Acid	1000ml/ha 2.1g/l	Bore Water To pH 4	13.4-	35.6-
8	Glyphosate CT LI-700	1000ml/ha 2.5ml/l	Bore Water	12.4-	52.5-
9	Glyphosate CT Liase	1000ml/ha 2% v/v	Bore Water	22.3-	40.0-
10	Glyphosate CT Liase Citric Acid	1000ml/ha 2% v/v 2.1g/l	Bore Water To pH ~4	9.0-	45.6-
11	Glyphosate CT Gp A S Uptake	1000ml/ha 400ml/ha 0.5% v/v	Bore Water	17.3-	37.5-
12	Glyphosate CT Gp A S Citric Acid Uptake	1000ml/ha 400ml/ha 0.5% v/v	Bore Water To Match pH Trt 14	16.4-	37.5-
13	Glyphosate CT Gp A S Citric Acid Uptake	1000ml/ha 400ml/ha 2.1g/l 0.5% v/v	Bore Water To pH ~4	14.2-	47.5-
14	Glyphosate CT Gp A S LI-700 Uptake	1000ml/ha 400ml/ha 2.5ml/l 0.5% v/v	Bore Water	10.7-	55.6-
15	Glyphosate CT Gp A S Liase Uptake	1000ml/ha 400ml/ha 2% v/v 0.5% v/v	Bore Water	10.2-	61.3-

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Pest Name				Awnless Barnyard grass	Liverseed Grass
Crop Name				Fallow	Fallow
Rating Date				22/12/2015	22/12/2015
Rating Type				PHYNEC	PHYNEC
Rating Unit				%	%
Treatment-Evaluation Interval				15 DAA	15 DAA
ARM Action Codes				AL	ER3
Trt No.	Treatment	Product Rate	Appln Description		
16	Glyphosate CT Gp A S Liase Citric Acid Uptake	1000ml/ha 400ml/ha 2% v/v 2.1g/l 0.5% v/v	Bore water   To pH ~4	21.6-	67.5-
LSD P= Treatment Prob.(F)=				nsd 0.6133	nsd 0.1315

Pest Scientific Name				<i>Echinochloa colona</i>	<i>Urochloa panicoides</i>
Pest Name				Awnless Barnyard Grass	Liverseed Grass
Crop Name				Fallow	Fallow
Rating Date				13/01/2016	13/01/2016
Rating Type				REGROWING PLANTS	REGROWING PLANTS
Rating Unit				%	%
Treatment-Evaluation Interval				37 DAA	37 DAA
Trt No.	Treatment	Product Rate	Appln. Description		
1	Glyphosate CT	1000ml/ha	Rain water	100	100
2	Glyphosate CT Citric Acid	1000ml/ha	Rain water To match pH Trt 4	100	100
3	Glyphosate CT Citric Acid	1000ml/ha 2.1g/l	Rain water To pH 4	100	100
4	Glyphosate CT LI-700	1000ml/ha 2.5ml/l	Rain water	100	100
5	Glyphosate CT	1000ml/ha	Bore water	100	100
6	Glyphosate CT Citric Acid	1000ml/ha	Bore water To match pH Trt 8	100	100
7	Glyphosate CT Citric Acid	1000ml/ha 2.1g/l	Bore water To pH 4	100	100
8	Glyphosate CT LI-700	1000ml/ha 2.5ml/l	Bore water	100	100
9	Glyphosate CT Liase	1000ml/ha 2% v/v	Bore water	100	100
10	Glyphosate CT Liase Citric Acid	1000ml/ha 2% v/v 2.1g/l	Bore water  To PH ~4	100	100
11	Glyphosate CT Gp A S Uptake	1000ml/ha 400ml/ha 0.5% v/v	Bore water	100	100

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Location: Goondiwindi

Trial Year: 2015

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Pest Name				Awnless Barnyard grass	Liverseed Grass
Crop Name				Fallow	Fallow
Rating Date				13/01/2016	13/01/2016
Rating Type				REGROW	REGROW
Rating Unit				%	%
Treatment-Evaluation Interval				37 DAA	37 DAA
Trt No.	Treatment	Product Rate	Appl. Description		
12	Glyphosate CT Gp A S Citric Acid Uptake	1000ml/ha 400ml/ha  0.5% v/v	Bore Water  To Match pH Trt 14	100	100
13	Glyphosate CT Gp A S Citric Acid Uptake	1000ml/ha 400ml/ha 2.1g/l 0.5% v/v	Bore Water  To pH ~4	100	100
14	Glyphosate CT Gp A S LI-700 Uptake	1000ml/ha 400ml/ha 2.5ml/l 0.5% v/v	Bore Water	100	100
15	Glyphosate CT Gp A S Liase Uptake	1000ml/ha 400ml/ha 2% v/v 0.5% v/v	Bore Water	100	100
16	Glyphosate CT Gp A S Liase Citric Acid Uptake	1000ml/ha 400ml/ha 2% v/v 2.1g/l 0.5% v/v	Bore Water  To pH ~4	100	100
LSD P=				NA	NA
Treatment Prob.(F)=				NA	NA

Means followed by same letter do not significantly differ (P=.05, LSD)

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.

Excluded replicate 3 in column 4; 3 in 5

nsd = No significant difference

### Rating Type

PHYNEC = phytotoxicity - necrosis /burn down

### ARM Action Codes

AL = Automatic log transformation of X+1

ER3 = Excluded replicate 3

DAA = Days after Application

## Citric Acid as an Adjuvant for Control of Summer Grasses in Fallow 2015-16

Trial ID: DK1501

Location: Goondiwindi

Trial Year: 2015

Application Description	
Application Date:	7/12/2015
Application Start Time:	8:40 AM
Application Stop Time:	11:40 AM
Application Method:	SPRAY
Application Timing:	Early Post-Em
Air Temperature, Unit:	26.6 C
% Relative Humidity:	47.3
Wind Velocity, Unit:	0.9 m/s
Wind Direction:	NNE
Dew Presence (Y/N):	No
Soil Moisture:	DRY
% Cloud Cover:	0

Application Equipment	
Application Equipment:	Quad Bike
Equipment Type:	BOOM S
Operation Pressure, Unit:	300 kPa
Nozzle Type:	AIXR
Nozzle Size:	015
Nozzle Spacing, Unit:	50 cm
Nozzles/Row:	8
Boom Length, Unit:	4 m
Boom Height, Unit:	50 cm
Ground Speed, Unit:	10.3 km/hr
Carrier:	WATER
Spray Volume, Unit:	70 L/ha