Copper Management for the Future

Trial Results Summary

Strawberry Hill Site

Co-operator: Shane Nelligan (0428 852 259) **Location:** '-34.48471 135.70021

Soil Test Results

Depth (cm)	P (cowell)	PBI	pH (cacl)	Ece	Org C	Effective CEC	Ec Ca (mg/kg)	Ex Mg (mg/kg)	Ex K (mg/kg)	Ex Na (mg/kg)	Sulfur (KCl40)	Texture	Nitrate-N	NH4 -N	Cu (DPTA)	Zn (DPTA)	Fe (DPTA)	Mn (DPTA)	Boron
0-10	24	39.3	5.3		1.3	4	557	62	162	44	6.8	Sandy Loam	12	4	1.21	1.53	87.82	7.11	
10-30			6	0.527								Light Clay	1	2					1.3
30-60			6.1	0.51								Light Clay	1	1					2
60-90			6.3	0.483								Medium Clay	1	1					2.4

Sowing Date:	18 May 2017	Dry - emergence date approx 20 June-17
Copper Spray Application 1 (GS21)	26 July 2017	
Copper Spray Application 2 (GS31)	14 August 2017	
Copper Spray Application 3 (GS 41)	24 August 2017	
Copper Spray Application 4 (GS49)	15 September 2017	
Copper Spray Application 5 (Flowering)	21 September 2017	

Tissue Test Results **summary of 4 replicates taken as GS41 (24 Aug)**

Tissue Tests	Cu (mg/kg)	Zn (mg/kg)	Mn (mg/kg)
Nil	6.0	16.0	65.2
Seeding_Sulphate_2kg	7.4	15.5	67.2
Seeding_AminoAcidChelate_2l	6.5	17.3	64.2
GS21_Sulphate_250g	6.8	16.8	67.5
GS21_AminoAcidChelate_4l	6.7	16.8	77.5
lsd (5%)	1.25	ns	ns

Trial Management:

- 80kg/ha Mace
- 80kg/ha 18:20 + impact
- Minnipa seeder
- 2m centres
- Soil dry, reasonably friable
- Sowing treatments of copper sulphate and chelate applied through fluid system.

Herbicide:

- 118gms/l Sakura
- 1.8 l/ha Axadex Xtra
- 2l/ha Roundup.

In crop:

20th July

- Sprayed for broadleaf with Bromoxynil @ 1.4L/ha

21st August

- Nitrogen Application, granular urea at 100kg/ha prior to showers

Head sterility was scored at maturity and no differences were found

Harvest Grain Sample Testing – Summary of 4 replicates taken as grain samples at harvest

Tissue Tests	Cu (mg/kg)
Nil	4.10
Seeding_Sulphate_2kg	5.57
Seeding_AminoAcidChelate_2l	4.82
GS21_Sulphate_250g	4.94
GS21_AminoAcidChelate_4l	4.69
lsd (5%)	ns

Strawberry Hill 2017 Grain Yield and NDVI results

Treatment	Yield (t/(ha)	NDVI 1	NDVI 2
Flowering_AminoAcidChelate_2l	2.33	0.60	0.53
Flowering_AminoAcidChelate_4l	2.27	0.57	0.51
Flowering_Sulphate_125g	2.28	0.58	0.53
Flowering_Sulphate_250g	2.24	0.58	0.53
GS21_AminoAcidChelate_1l	2.37	0.59	0.58
GS21_AminoAcidChelate_2l	2.14	0.58	0.52
GS21_AminoAcidChelate_2l+GS31_Ammino Acid Chelate@2L	2.39	0.60	0.52
GS21_AminoAcidChelate_2l+GS41_Ammino Acid Chelate@2L	2.33	0.58	0.53
GS21_AminoAcidChelate_2l+GS49_Amino Acid Chelate@2L	2.25	0.58	0.53
GS21_AminoAcidChelate_4l	2.37	0.58	0.51
GS21_Sulphate_125g	2.34	0.58	0.51
GS21_Sulphate_125g+GS31_Sulphate@125g	2.36	0.58	0.51
GS21_Sulphate_125g+GS41_Sulphate@125gm	2.24	0.58	0.55
GS21_Sulphate_125g+GS49_Sulphate@125	2.28	0.59	0.53
GS21_Sulphate_250g	2.31	0.57	0.49
GS31_AminoAcidChelate_1l	2.03	0.57	0.49
GS31_AminoAcidChelate_2l	2.21	0.54	0.47
GS31_AminoAcidChelate_2l+GS49_	2.22	0.60	0.51
GS31_AminoAcidChelate_4l	2.40	0.57	0.49
GS31_Sulphate_125g	2.51	0.58	0.53
GS31_Sulphate_125g+GS41_Sulpha	2.33	0.57	0.52
GS31_Sulphate_125g+GS49_Sulpha	2.36	0.57	0.41
GS31_Sulphate_250g	2.31	0.58	0.51
GS41_AminoAcidChelate_1l	2.12	0.57	0.52
GS41_AminoAcidChelate_2l	2.22	0.56	0.52
GS41_AminoAcidChelate_4l	1.85	0.55	0.44
GS41_Sulphate_125g	2.55	0.61	0.53
GS41_Sulphate_250g	2.30	0.58	0.49
GS49_AminoAcidChelate_1l	2.07	0.58	0.53
GS49_AminoAcidChelate_2l	2.31	0.60	0.54
GS49_AminoAcidChelate_4l	2.26	0.58	0.53
GS49_Sulphate_125g	2.11	0.56	0.48
GS49_Sulphate_250g	2.19	0.58	0.51
Nil	2.27	0.59	0.53
Seeding_AminoAcidChelate_1l	2.28	0.60	0.53
Seeding_AminoAcidChelate_1l+GS31 Amino Acid Chelate @ 2l/ha	2.06	0.59	0.52
Seeding_AminoAcidChelate_1l+GS41 Amino Acid Chelate 2l/ha	1.96	0.56	0.46
Seeding_AminoAcidChelate_1l+GS49 Amino Acid Chelate @ 2l/ha	2.13	0.56	0.48
Seeding_AminoAcidChelate_2l	2.08	0.56	0.51
Seeding_Sulphate_1+GS21 Sulphate@125	2.47	0.58	0.52
Seeding_Sulphate_1+GS41 Sulphate 125	2.31	0.55	0.50
Seeding_Sulphate_1kg	2.12	0.57	0.50
Seeding_Sulphate_1kg+GS49_Sulphate@125g	2.25	0.60	0.53
Seeding_Sulphate_2kg	2.30	0.58	0.51
LSD (5%)	0.41	0.04	0.07
CV	13.10	5.3	9.6

Highest yielding treatment not significantly different from Nil.