Response Ln kg/ha

Actual by Predicted Plot

RMSE=0.9662 RSq=0.47
PValue=<.0001
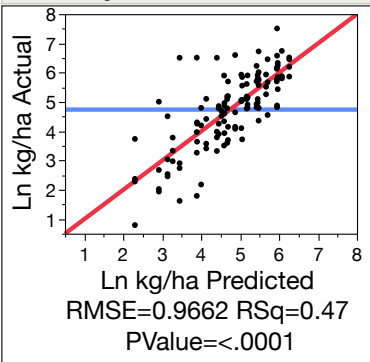
Effect Summary

| Source	LogWorth		PValue
Depth	8.188		0.00000
Date	7.492		0.00000
Rotation*Date	1.787		0.01634
Year*Date	1.422		0.03780
Year*Rotation*Depth	1.159		0.06928
Year*Rotation	0.759		0.17426
Rotation	0.632		0.23349
Year*Depth	0.365		0.43167
Year*Rotation*Date	0.280		0.52522
Rotation*Depth	0.231		0.58780
Year	0.215		0.61000
Date*Depth	0.212		0.61339
Year*Rotation*Date*Depth	0.181		0.65851
Rotation*Date*Depth	0.065		0.86138
Year*Date*Depth	0.010		0.97790

Residual by Predicted Plot
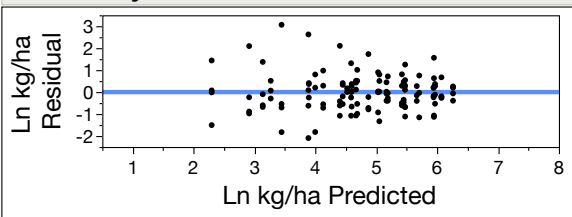
Studentized Residuals
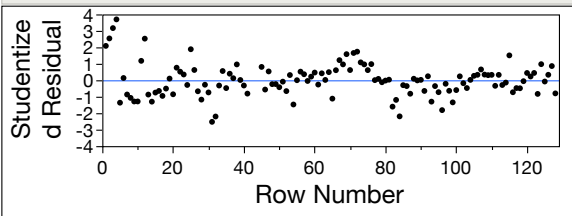
REML Studentized Residuals

Summary of Fit

RSquare	0.469664
RSquare Adj	0.292886
Root Mean Square Error	0.966186
Mean of Response	4.738857
Observations (or Sum Wgts)	125

REML Variance Component Estimates

Random Effect	Var Ratio	Var Component	Std Error	95% Lower	95% Upper	Wald p-Value	Pct of Total
Year*Block	-0.114659	-0.107036	0.1085112	-0.319714	0.1056422	0.3239	0.000
Block[Year,Rotation]	0.2808808	0.2622066	0.188387	-0.107025	0.6314384	0.1640	21.131
Block[Year,Rotation,Depth]	-0.232644	-0.217177	0.1346834	-0.481152	0.0467977	0.1069	0.000
Block	0.0483458	0.0451316	0.0653544	-0.082961	0.1732238	0.4898	3.637
Residual		0.9335156	0.2085172	0.6294865	1.5273784		75.232
Total		1.2408538	0.2860837	0.8272674	2.0668599		100.000

 -2 LogLikelihood = 376.58456561
Note: Total is the sum of the positive variance components.
Total including negative estimates = 0.9166409

Response Ln kg/ha

Fixed Effect Tests

Source	Nparm	DF	DFDen	F Ratio	Prob > F
Year	1	1	2.515	0.3359	0.6100
Rotation	1	1	6.088	1.7492	0.2335
Year*Rotation	1	1	6.088	2.3654	0.1743
Date	1	1	41.33	45.9928	<.0001*
Year*Date	1	1	41.33	4.6048	0.0378*
Rotation*Date	1	1	41.33	6.2666	0.0163*
Year*Rotation*Date	1	1	41.33	0.4106	0.5252
Depth	3	3	27.65	30.4890	<.0001*
Year*Depth	3	3	27.65	0.9465	0.4317
Rotation*Depth	3	3	27.65	0.6531	0.5878
Year*Rotation*Depth	3	3	27.65	2.6391	0.0693
Date*Depth	3	3	41.45	0.6083	0.6134
Year*Date*Depth	3	3	41.45	0.0654	0.9779
Rotation*Date*Depth	3	3	41.45	0.2493	0.8614
Year*Rotation*Date*Depth	3	3	41.45	0.5386	0.6585

Effect Details

Year

Least Squares Means Table

Level	Least Sq Mean	Std Error
2019	4.7851149	0.15842715
2020	4.6865761	0.16241094

Rotation

Least Squares Means Table

Level	Least Sq Mean	Std Error
C2	4.5459888	0.19615974
C4	4.9257022	0.19939106

Year*Rotation

Least Squares Means Table

Level	Least Sq Mean	Std Error
2019,C2	4.3744779	0.25627015
2019,C4	5.1957519	0.25627015
2020,C2	4.7174997	0.25627015
2020,C4	4.6556525	0.26605827

Date

Least Squares Means Table

Level	Least Sq Mean	Std Error
begin	4.1441309	0.15963746
end	5.3275601	0.16359179

Year*Date

Least Squares Means Table

Level	Least Sq Mean	Std Error
2019,begin	4.0061719	0.19921180
2019,end	5.5640580	0.19921180
2020,begin	4.2820899	0.19921180
2020,end	5.0910623	0.21165528

Response Ln kg/ha

Effect Details

Year*Date

Slice Year=2019

NumDF	DenDF	F Ratio	Prob > F
1	40.09	41.5977	<.0001*

Slice Year=2020

NumDF	DenDF	F Ratio	Prob > F
1	42.53	10.3130	0.0025*

Slice Date=begin

NumDF	DenDF	F Ratio	Prob > F
1	8.877	1.3402	0.2772

Slice Date=end

NumDF	DenDF	F Ratio	Prob > F
1	9.789	3.6133	0.0871

Least Squares Means Plot
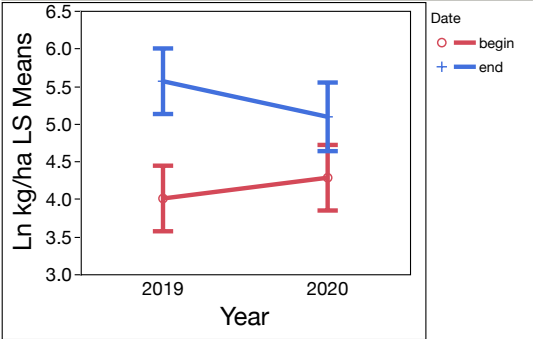
Rotation*Date

Least Squares Means Table

Level	Least Sq Mean	Std Error
C2,begin	3.7358581	0.23035803
C2,end	5.3561196	0.23035803
C4,begin	4.5524038	0.23035803
C4,end	5.2990007	0.24119999

Least Squares Means Plot
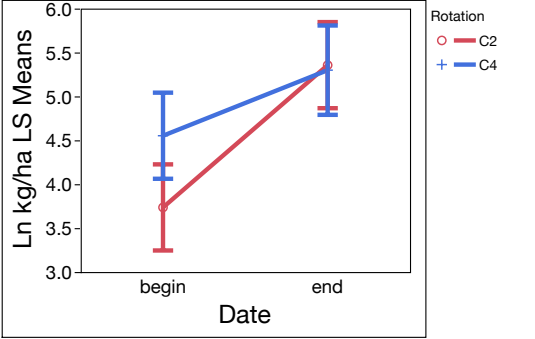
Response Ln kg/ha

Effect Details

Rotation*Date

Slice Rotation=C2

NumDF	DenDF	F Ratio	Prob > F
1	40.09	44.9955	<.0001*

Slice Rotation=C4

NumDF	DenDF	F Ratio	Prob > F
1	42.53	8.7840	0.0050*

Slice Date=begin

NumDF	DenDF	F Ratio	Prob > F
1	10.85	6.0436	0.0320*

Slice Date=end

NumDF	DenDF	F Ratio	Prob > F
1	11.52	0.0283	0.8694

Year*Rotation*Date

Least Squares Means Table

Level	Least Sq Mean	Std Error
2019,C2,begin	3.3212125	0.30797199
2019,C2,end	5.4277434	0.30797199
2019,C4,begin	4.6911313	0.30797199
2019,C4,end	5.7003726	0.30797199
2020,C2,begin	4.1505036	0.30797199
2020,C2,end	5.2844958	0.30797199
2020,C4,begin	4.4136763	0.30797199
2020,C4,end	4.8976288	0.33955443

Depth

Least Squares Means Table

Level	Least Sq Mean	Std Error
0-15cm	5.5224043	0.17288761
15-30cm	5.0215065	0.17624025
30-45cm	4.5235722	0.17624025
45-60cm	3.8758992	0.17624025

Year*Depth

Least Squares Means Table

Level	Least Sq Mean	Std Error
2019,0-15cm	5.4545574	0.22022115
2019,15-30cm	4.9869173	0.22022115
2019,30-45cm	4.6215093	0.22022115
2019,45-60cm	4.0774758	0.22022115
2020,0-15cm	5.5902512	0.22022115
2020,15-30cm	5.0560956	0.23060651
2020,30-45cm	4.4256351	0.23060651
2020,45-60cm	3.6743226	0.23060651

Rotation*Depth

Least Squares Means Table

Level	Least Sq Mean	Std Error
C2,0-15cm	5.4471580	0.24875055
C2,15-30cm	4.6958195	0.24875055
C2,30-45cm	4.3446980	0.24875055
C2,45-60cm	3.6962798	0.24875055
C4,0-15cm	5.5976506	0.24875055
C4,15-30cm	5.3471935	0.25799001
C4,30-45cm	4.7024463	0.25799001
C4,45-60cm	4.0555185	0.25799001

Year*Rotation*Depth

Date*Depth

Least Squares Means Table

Level	Least Sq Mean	Std Error
begin,0-15cm	5.1086843	0.24302775
begin,15-30cm	4.3464523	0.24302775
begin,30-45cm	3.9590156	0.24302775
begin,45-60cm	3.1623715	0.24302775
end,0-15cm	5.9361243	0.24302775

Response Ln kg/ha

Effect Details

Date*Depth

Least Squares Means Table

Level	Least Sq Mean	Std Error
end,15-30cm	5.6965606	0.25247673
end,30-45cm	5.0881288	0.25247673
end,45-60cm	4.5894269	0.25247673

Year*Date*Depth

Rotation*Date*Depth

Year*Rotation*Date*Depth

Year*Block

Least Squares Means Table

Level	Least Sq Mean	Std Error
2019,1	5.0034009	.
2019,2	4.3312250	.
2019,3	4.9998053	.
2019,4	4.8060286	.
2020,1	4.3884349	.
2020,2	5.1236622	.
2020,3	4.5277321	.
2020,4	4.7064754	.

Block[Year,Rotation]

Block[Year,Rotation,Depth]

Block

Least Squares Means Table

Level	Least Sq Mean	Std Error
1	4.9507184	0.14070319
2	4.7810611	0.14748338
3	4.5855757	0.14070319
4	4.6260270	0.14070319

Prediction Profiler