ods html close; ods html;
data AF2013;
Input PLOT REP BLOCK ENTRY NAME$ Height TSW Oil Yield;
Oilyld=yield*oil/100;
datalines;
  1001 1 1 82 179-53-2 22.5 9.48 26.16 782
  1002 1 1 83 179-56-1 22.5 9.38 27.42 832
  1003 1 1 97 179-83-1 23.5 8.56 24.25 944
  1004 1 1 117 188-14-1 19.5 7.90 28.11 721

  2129 2 24 89 179-63-1 24.0 10.10 26.68 858
  2130 2 24 74 179-38-1 22.5 9.35 28.40 631
  2131 2 24 53 179-4-2 20.5 9.51 25.76 1127
  2132 2 24 127 188-133-2 22.5 9.62 25.37 721
;  
PROC glm data=AF2013 outstat=glmstats;
TITLE 'Analysis as a simple lattice with GLM';
class Rep Block Entry;
model Height TSW Oil Yield Oilyld = Rep Block(Rep) Entry;
random Rep Block(Rep)/test;
output out=new
P=pheight ptsw poil pyield poilyld
r=rheight rtsw roil ryield roilyld;
lsmeans Entry/stderr;
ODS output lsmeans=GLMmeans;
run;
proc gplot data=new;
TITLE 'Residual Plots';
plot rheight*pheight;
plot rtsw*ptsw;
plot roil*poil;
plot ryield*pyield;
plot roilyld*poilyld;
run;
PROC MIXED data=AF2013;
TITLE 'Simple Lattice for height with PROC MIXED, entries fixed';
class Rep Block Entry;
model height = Entry;
random Rep Block(Rep) /solution;
ods output solutionr=sheight;
lsmeans entry/pdiff=control('128');
ods output lsmeans=aheight;
run;
proc mixed data=AF2013;
title 'Simple Lattice for TSW with PROC MIXED, entries fixed';
class Rep Block Entry;
model TSW = Entry;
random Rep Block(Rep)/solution;
odds output solutionr=sTSW;
lsmeans entry/pdiff=control('128');
odds output lsmeans=aTSW;
run;
proc mixed data=AF2013;
title 'Simple Lattice for oil with PROC MIXED, entries fixed';
class Rep Block Entry;
model oil = Entry;
random Rep Block(Rep)/solution;
odds output solutionr=soil;
lsmeans entry/pdiff=control('128');
odds output lsmeans=aoil;
run;
proc mixed data=AF2013;
title 'Simple Lattice for yield with PROC MIXED, entries fixed';
class Rep Block Entry;
model yield = Entry;
random Rep Block(Rep)/solution;
odds output solutionr=syield;
lsmeans entry/pdiff=control('128');
odds output lsmeans=ayield;
run;
proc mixed data=AF2013;
title 'Simple Lattice for oilyld with PROC MIXED, entries fixed';
class Rep Block Entry;
model oilyld = Entry;
random Rep Block(Rep)/solution;
odds output solutionr=soilyld;
lsmeans entry/pdiff=control('128');
odds output lsmeans=aoilyld;
run;
data randall;
merge
sHeight(rename=(Estimate=height StdErrPred=seheight))
syield(rename=(Estimate=yield StdErrPred=seyield))
sTSW(rename=(Estimate=TSW StdErrPred=seTSW))
soil(rename=(Estimate=oil StdErrPred=seoil))
soilyld(rename=(Estimate=oilyld StdErrPred=seoilyld));
run;
Data fixall;
merge aHeight(rename=(Estimate=height StdErr=seheight))
ayield(rename=(Estimate=yield StdErr=seyield))
aTSW(rename=(Estimate=TSW StdErr=seTSW))
aoil(rename=(Estimate=oil StdErr=seoil))
aoilyld(rename=(Estimate=oilyld StdErr=seoilyld));
run;
PROC MIXED data=AF2013;
TITLE 'BLUP Analysis of Simple Lattice for height with PROC MIXED';
class Rep Block Entry;
model height = ;
random Rep Block(Rep) Entry/solution;
ods output solutionr=dheight;
run;
PROC MIXED data=AF2013;
TITLE 'BLUP Analysis of Simple Lattice for TSW with PROC MIXED';
class Rep Block Entry;
model TSW = ;
random Rep Block(Rep) Entry/solution;
ods output solutionr=dTSW;
run;
PROC MIXED data=AF2013;
TITLE 'BLUP Analysis of Simple Lattice for oil with PROC MIXED';
class Rep Block Entry;
model oil = ;
random Rep Block(Rep) Entry/solution;
ods output solutionr=doil;
run;
PROC MIXED data=AF2013;
TITLE 'BLUP Analysis of Simple Lattice for yield with PROC MIXED';
class Rep Block Entry;
model yield = ;
random Rep Block(Rep) Entry/solution;
ods output solutionr=dyield;
run;
PROC MIXED data=AF2013;
TITLE 'BLUP Analysis of Simple Lattice for oilyld with PROC MIXED';
class Rep Block Entry;
model oilyld = ;
random Rep Block(Rep) Entry/solution;
ods output solutionr=doilyld;
run;
Data combined;
merge
dHeight(rename=(Estimate=height StdErrPred=seheight))
dTSW(rename=(Estimate=TSW StdErrPred=seTSW))
doil(rename=(Estimate=oil StdErrPred=seoil))
dyield(rename=(Estimate=yield StdErrPred=seyield))
doilyld(rename=(Estimate=oilyld StdErrPred=seoilyld));
by entry;
run;
quit;