Model selection of fixed effects for the Rh linear mixed effect model

The symbol \* indicates that interactions between environmental variables are being tested, as well as the environmental variables being tested individually.

1) Original model.

Rh model 1<-lme(log(Rh)~Plantation\*Microform\*Soil moisture

+Plantation\*Microform\*Soil temperature

+Plantation\*Microform\*Air temperature

+Plantation\*Microform\*WTD,

random=~1|Plantation/Plot/Subplot,

correlation=corCompSymm(form=~1|Plantation/Plot/Subplot/Microform),

weights= varIdent(form=~1|Plantation\*Microform))

2) The interaction between plantation and microform with WTD was dropped.

Rh model 2<-lme(log(Rh)~Plantation\*Microform\*Soil moisture

+Plantation\*Microform\*Soil temperature

+Plantation\*Microform\*Air temperature

+Plantation\*WTD

+Microform\*WTD,

random=~1|Plantation/Plot/Subplot,

correlation=corCompSymm(form=~1|Plantation/Plot/Subplot/Microform),

weights= varIdent(form=~1|Plantation\*Microform))

3) The interaction between microform and WTD was dropped.

Rh model 3<-lme(log(Rh)~Plantation\*Microform\*Soil moisture

+Plantation\*Microform\*Soil temperature

+Plantation\*Microform\*Air temperature

+Plantation\*WTD,

random=~1|Plantation/Plot/Subplot,

correlation=corCompSymm(form=~1|Plantation/Plot/Subplot/Microform),

weights= varIdent(form=~1|Plantation\*Microform))

4) The interaction between plantation and microform with air temperature was dropped.

Rh model 4<-lme(log(Rh)~Plantation\*Microform\*Soil moisture

+Plantation\*Microform\*Soil temperature

+Plantation\*Air temperature

+Microform\*Air temperature

+Plantation\*WTD,

random=~1|Plantation/Plot/Subplot,

correlation=corCompSymm(form=~1|Plantation/Plot/Subplot/Microform),

weights= varIdent(form=~1|Plantation\*Microform))

5) The interaction between plantation and air temperature was dropped.

Rh model 5<-lme(log(Rh)~Plantation\*Microform\*Soil moisture

+Plantation\*Microform\*Soil temperature

+Microform\*Air temperature

+Plantation\*WTD,

random=~1|Plantation/Plot/Subplot,

correlation=corCompSymm(form=~1|Plantation/Plot/Subplot/Microform),

weights= varIdent(form=~1|Plantation\*Microform))

6) The interaction between microform and air temperature was dropped. This is the final model.

Rh model 6<-lme(log(Rh)~Plantation\*Microform\*Soil moisture

+Plantation\*Microform\*Soil temperature

+Air temperature

+Plantation\*WTD,

random=~1|Plantation/Plot/Subplot,

correlation=corCompSymm(form=~1|Plantation/Plot/Subplot/Microform),

weights= varIdent(form=~1|Plantation\*Microform))