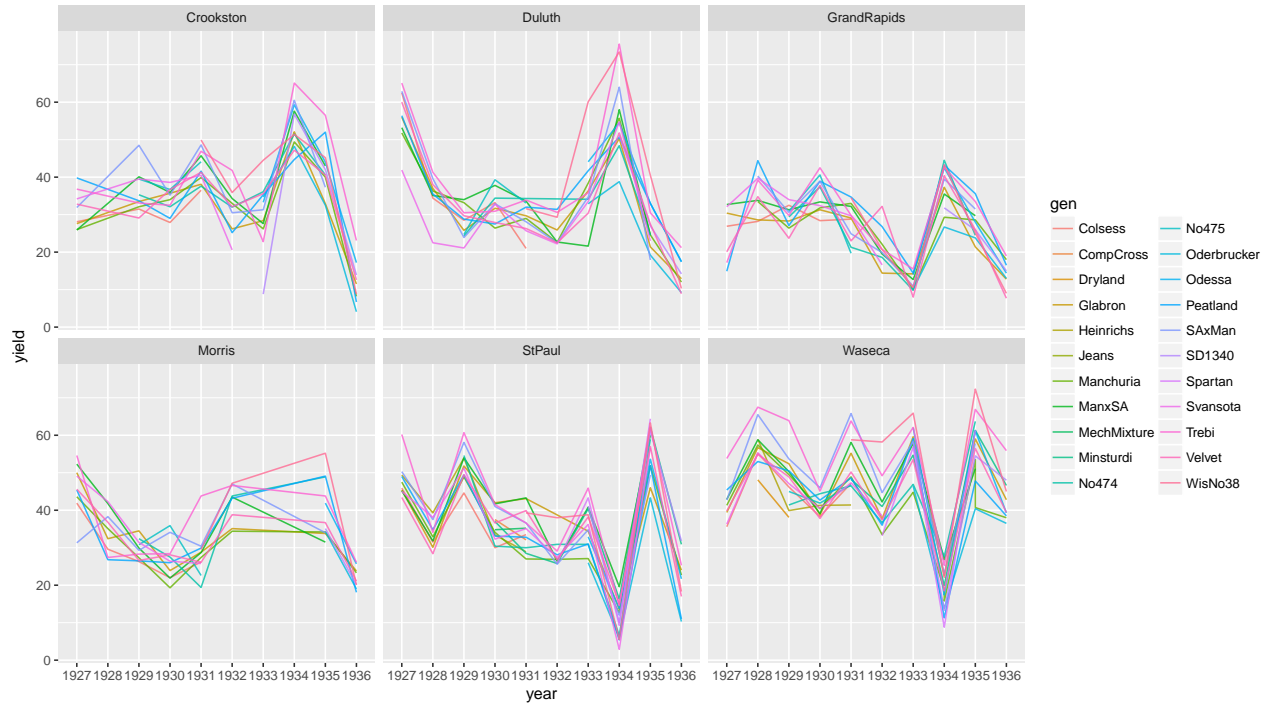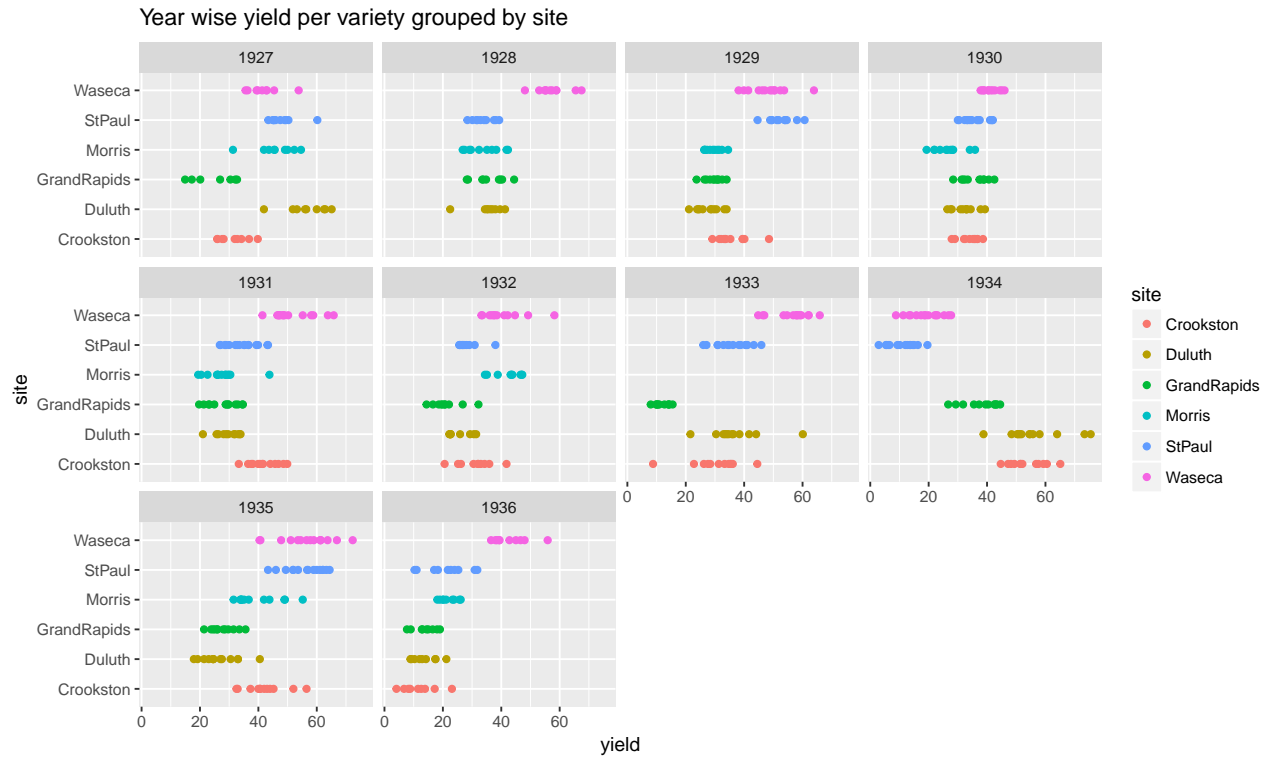# Assignment - 6

Dwipam

3/21/2017

Question 1:

As there is no skewness in Yield, we can consider Yield as the response variable and not do any transformation.

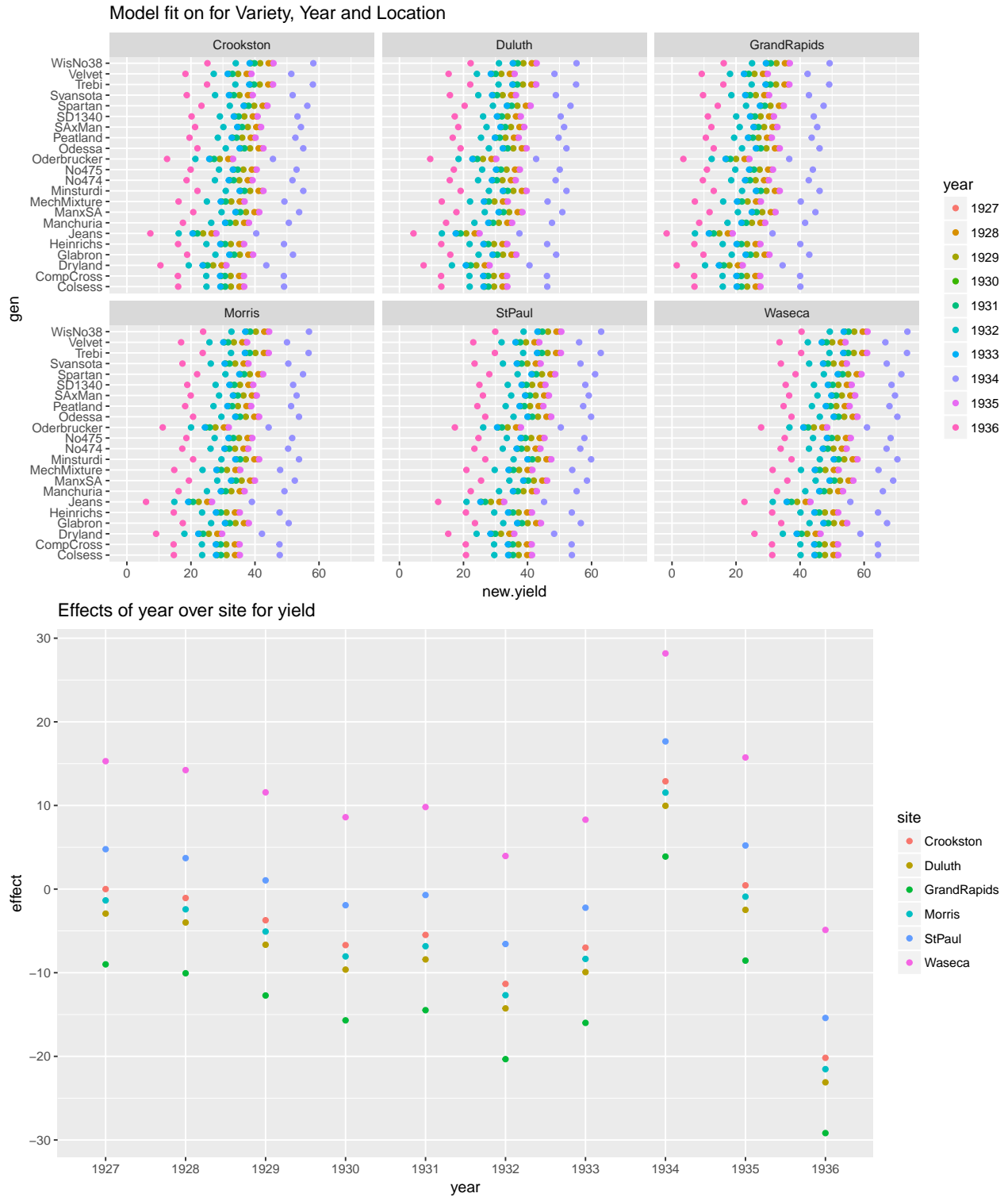Location wise per year yield grouped by Variety

There seems to be some decreasing pattern for Duluth, StPaul, GrandRapids, while Crookston, Morris, Waseca seems to have constant pattern.(As professor said, it might be interesting to see grouped by variety)
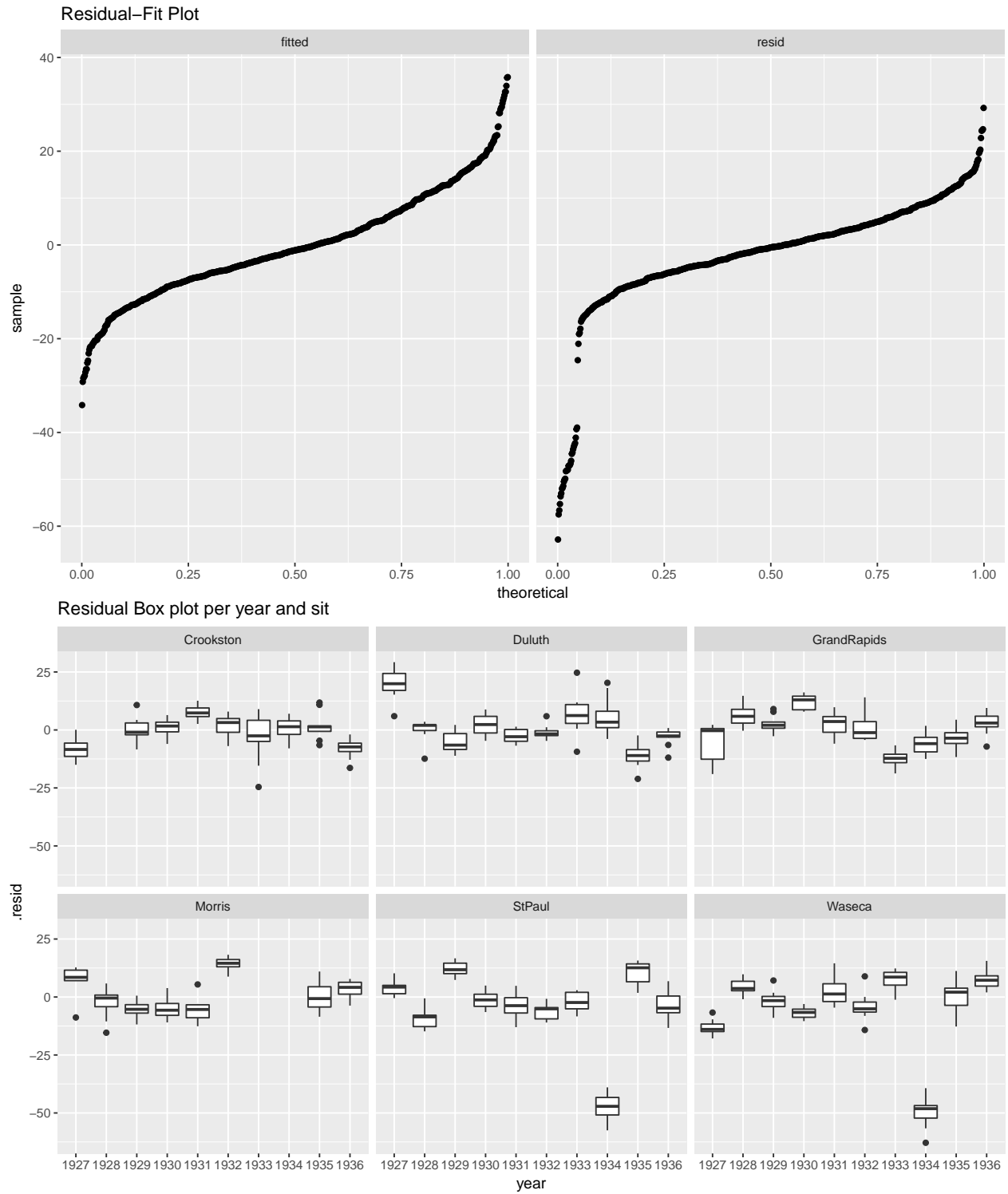
Question 2:

Year wise yield per variety grouped by site
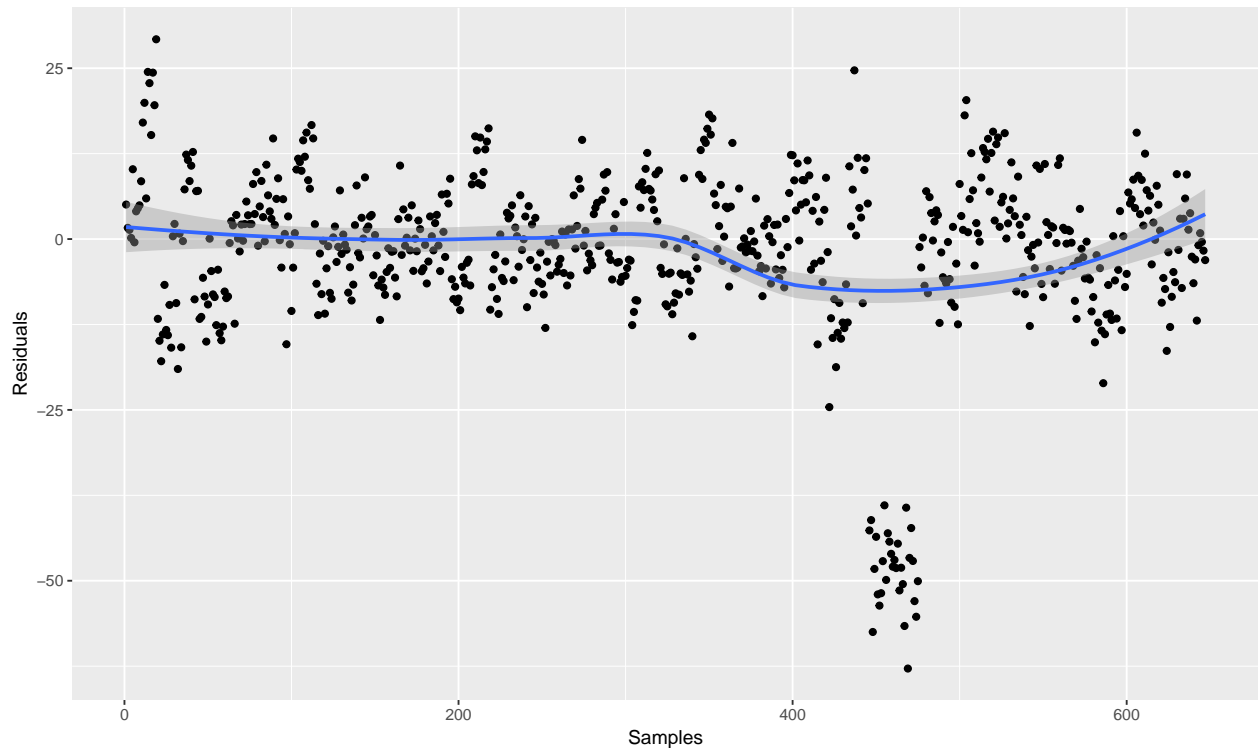
There does not seem to be a pattern for year and site, Hence for now I tried fitting simple model instead of interaction as only Year 1934 seems to be different than others for Waseca and StPaul site. Also not every site as data for all the given years, this would result into no values for the particular year and rlm with interaction won't be possible unless we impute missing values.

Model fit on for Variety, Year and Location

Effects of year over site for yield

After fitting the simple model and looking at the effects, it seems variance in effect for site does not vary yearly. There seems no pattern observed in the model. Hence there seems to be no pattern in Fitted Model. It would be interesting to look at the residuals as this is a simple model.

Question 3:

Residual−Fit Plot

Residual Box plot per year and sit

It seems for Year 1934 there are large amount of residuals still left because we can see that 1934 for Waseca and StPaul does not follow the pattern for the rest of the data as showed in Question 2. However for 1931 and 1932 seems to show no pattern in residuals.