target pH level increased most likely related to the high pH of the reference method.

The best relationship was found when the total acidity (TA) measured by the AE buffer (acidity determined from the soil-buffer equilibrium pH) was compared to the $BaCl_2$-TEA method. There is no convenient way, using the available data, to use the $BaCl_2$-TEA method as a reference method for low target pH values. Although there is a significant correlation, the r values are low and the C.V. values are very high.

Some workers have used the suggestion by Peech (1965) that only 80% of the $BaCl_2$-TEA measured acidity need be neutralized to attain a pH of 7.0. This generalization is based on the pH-BS relationship. It was felt that it would be inappropriate to employ this type of generalization to a reference method for use in this study.

The intent of this study was to relate it back to the incubation study in Chapter III. It was hoped that by comparing the data, from both studies, to the various target pH levels, the AE LR method could be evaluated on this wider range of soils. The data do show that the AE method does provide a good index of acidity as determined by the reference as shown by the low C.V. and high r values for the regression of total acidity measured by both methods against each other.

Results from Chapter III also showed a poor correlation between the $BaCl_2$-TEA method and AE LR to the low target pH levels. However, an excellent relationship was found between