Tri.Family <- data.frame(

Family=factor(),

a=numeric(),

b=numeric(),

a.pvalue=numeric(),

b.pvalue=numeric(), stringsAsFactors=FALSE, row.names=NULL)

Tri.Family [1:4,1]<- seq(1,4,1)

### Write a function to fit the model

Trifreshfamily <- function(dataframe){ y = nls( Trifreshmass ~ a \* exp(b\*TrifreshSA), dataframe,

start=list(a= iv$a , b= iv$b),

na.action=na.exclude, trace=F,

control=nls.control(warnOnly=T))

y.df <- as.data.frame(cbind(t(coef(summary(y)) [1:2, 1]), t(coef(summary(y)) [1:3, 4])))

names(y.df) <-c("a","b", "a.pvalue", "b.pvalue")

return (y.df )}

### Write a loop to fit curves and add paramters to a dataframe:

try(for(j in unique(Tri.fresh$Family)){

iv <- getInitial(Trifreshmass ~ SS.lrc("TrifreshSA", "a", "b"), data = Tri.fresh[which(Tri.fresh$Family == j),])

y3 <- try(Trifreshfamily(Tri.fresh[which(Tri.fresh$Family == j),]), silent=T)

try(Tri.Family[c(Tri.Family$Family == j ), 2:7 ] <- cbind(y3), silent=T)

rm(y3)

}, silent=T)

Tri.Family