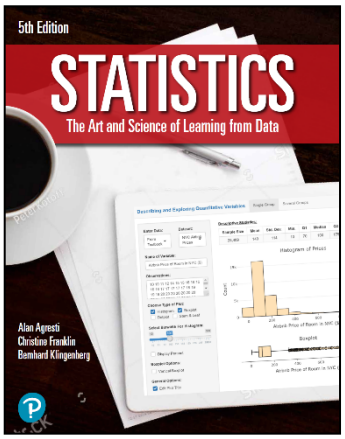


R Code for Examples in the book
"Statistics: The Art and Science of Learning from Data"
by Agresti, Franklin and Klingenberg, 5th edition

Chapter 3

Example 3: Pesticide Residues – Graphing Conditional Proportions

Reading in the data:

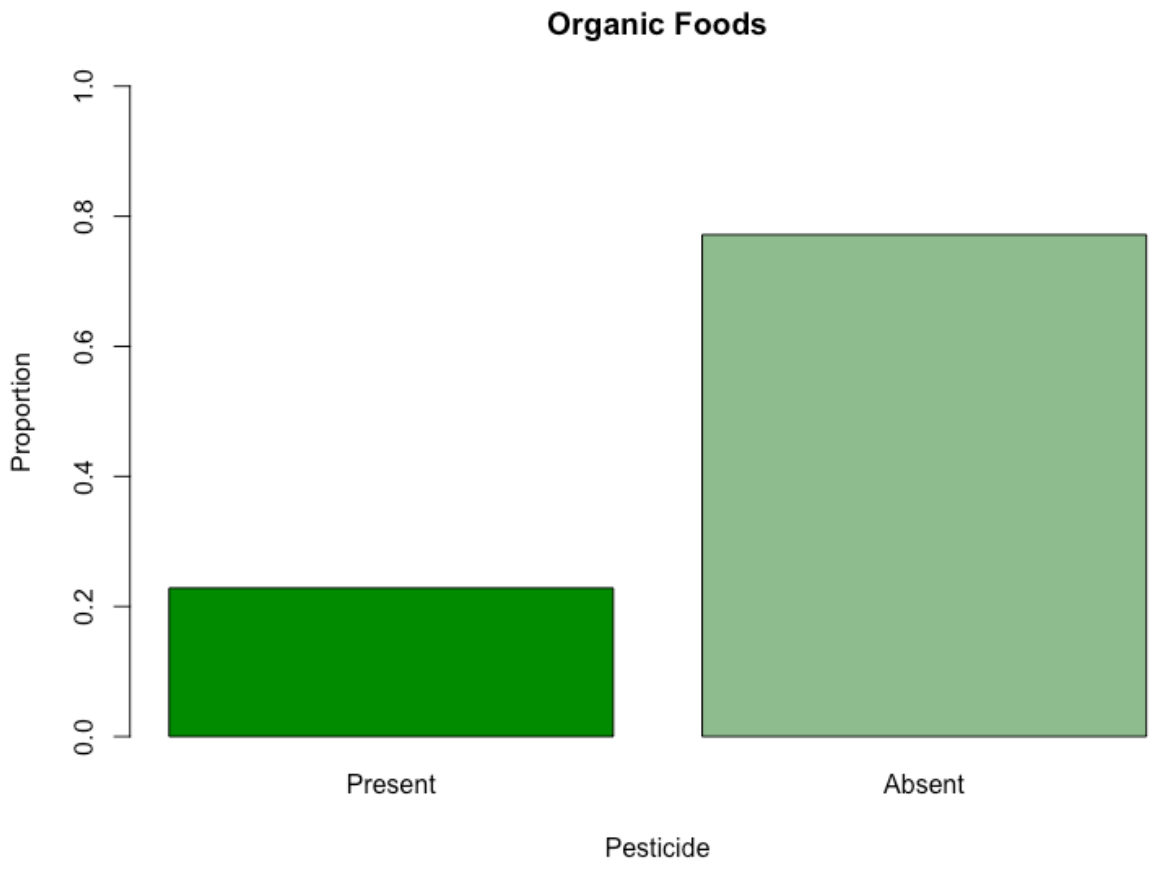
```
counts <- c(29, 98, 19485, 7086)
pesticide <- matrix(counts, nrow = 2 , ncol = 2, byrow = TRUE,
                    dimnames = list('Food Type' = c('Organic',
                                                    'Conventional'),
                                    'Pesticides'= c('Present',
                                                    'Absent')))
```

To find the conditional proportions for pesticide status

```
cond.props <- prop.table(pesticide, 1)
```

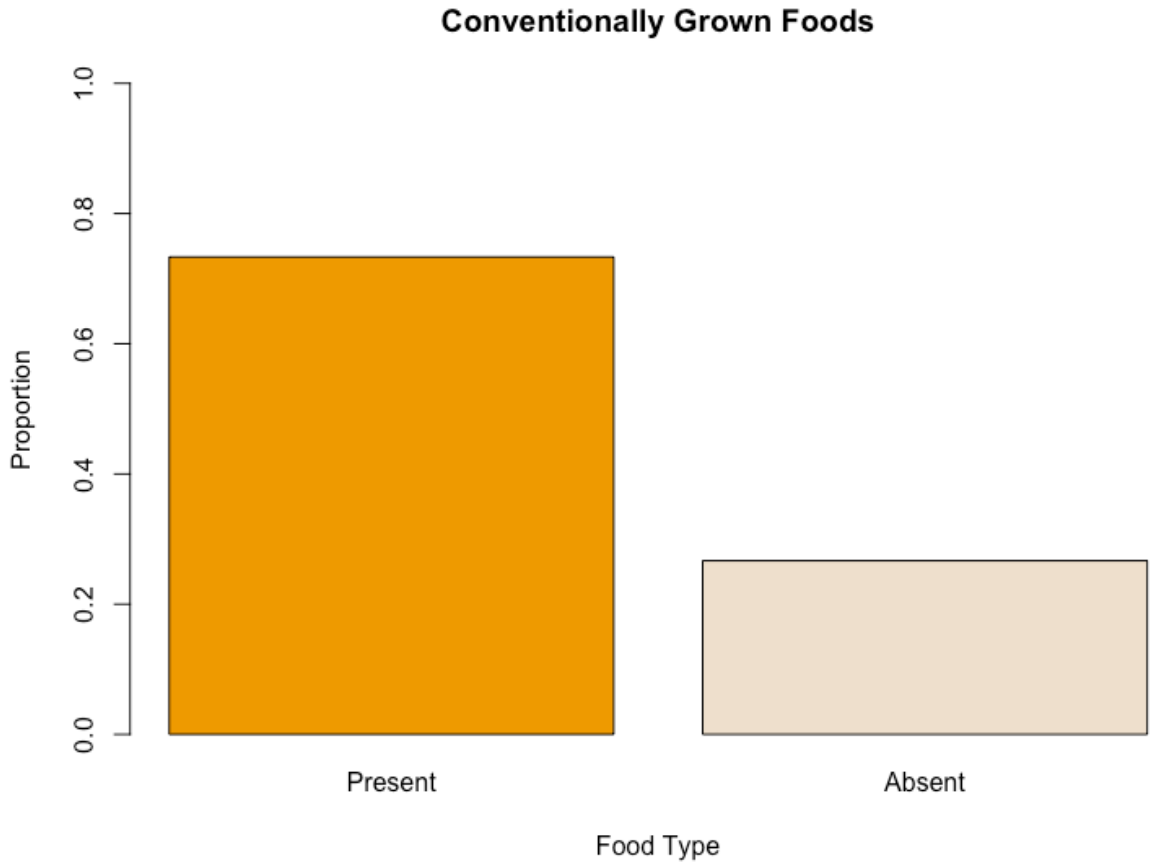
Bar graph of conditional proportions on pesticide status for organic foods

```
barplot(cond.props[1,], xlab='Pesticide', ylab='Proportion', ylim=c(0,1),
        main = 'Organic Foods',
        col = c('green4', 'darkseagreen'))
```



Bar graph of conditional proportions on pesticide status for conventionally foods

```
barplot(cond.props[2,], xlab='Food Type', ylab='Proportion', ylim=c(0,1),
        main = 'Conventionally Grown Foods',
        col = c('orange2', 'antiquewhite2'))
```



Bar graph of proportion of food samples with pesticide present

```
barplot(cond.props[,1], xlab = 'Food Type', ylab = 'Proportion', ylim =
c(0,1),
        main = 'Proportion of Food samples \n with Pesticide Present',
        col = c('green4', 'orange2'))
```