```
} else {
  print("Both sources of nitrogen are equally effective for Coarse Cereal")
}
```

This code calculates the mean grain yield for each treatment, then compares the means and prints a statement indicating which source of nitrogen is better. However, it's important to keep in mind that this is just a simple comparison based on the mean and doesn't take into account other factors that may influence the grain yield, such as soil type, weather conditions, and so on. Further statistical analysis may be necessary to fully assess the effectiveness of the two sources of nitrogen

```
t.test(NH4Cl,Urea,paired=TRUE,alt="less")

#INTERPRETATION:The p-value (0.753) is greater than the level of significance (0.05).
#So we do not reject our null hypothesis. Hence, the ammonium chloride
#is the better nitrogen source for paddy.
```

7) Before an increasing in exercise duty on tea, 800 persons out of a sample of 1000 persons were found to be tea drinkers. After an increasing in duty, 800 people were tea drinkers in a sample of 1200 people. Using SE of a proportion, state whether there is a significant decrease in consumption of tea after the increase in the exercise duty. in R

To determine whether there is a significant decrease in consumption of tea after the increase in the exercise duty, you can use the standard error (SE) of a proportion. The SE of a proportion can be used to calculate a confidence interval for the difference between two proportions. If the confidence interval for the difference does not include 0, it can be concluded that there is a significant difference between the two proportions. Here's how you can do this in R:

```
# Define the sample sizes and proportions
n1 <- 1000
p1 <- 800/1000
n2 <- 1200
p2 <- 800/1200

# Calculate the SE of the difference between the two proportions
SE_diff <- sqrt(p1 * (1 - p1)/n1 + p2 * (1 - p2)/n2)

# Calculate the confidence interval for the difference between the two proportions
CI_diff_lower <- p1 - p2 - qnorm(0.975) * SE_diff
CI_diff_upper <- p1 - p2 + qnorm(0.975) * SE_diff

# Test for a significant difference
if (CI_diff_lower > 0 || CI_diff_upper < 0) {
  print("There is a significant decrease in consumption of tea after the increase in the exercise duty")
}
else {
  print("There is not a significant decrease in consumption of tea after the increase in the exercise duty")
}
```

This code calculates the SE of the difference between the two proportions, and then calculates the 95% confidence interval for the difference. If the confidence interval for the difference does not include 0, it can be concluded that there is a significant decrease in consumption of tea after the increase in the exercise duty.

To determine if there is a significant decrease in consumption of tea after the increase in exercise duty, you can perform a hypothesis test using the standard error (SE) of a proportion.
Here's how you can perform this test in R using the prop.test function: