

# **Research Planning and Methodology in Animal Welfare**

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Invalid Date

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# **1 Research Planning and Methodology in Animal Welfare**

## **1.1 Preface**

This book accompanies the Research Planning and Methodology in Animal Welfare course on the International Animal Welfare Ethics and Law MSc at the Royal (Dick) School of Veterinary Studies.

It is a companion document to the course

## 2 Week 1

```
-- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
v dplyr      1.1.1      v readr      2.1.4
v forcats    1.0.0      v stringr    1.5.0
v ggplot2    3.4.2      v tibble     3.2.1
v lubridate  1.9.2      v tidyr      1.3.0
v purrr      1.0.1
-- Conflicts ----- tidyverse_conflicts() --
x dplyr::filter() masks stats::filter()
x dplyr::lag()     masks stats::lag()
i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become
```

### 2.1 Lecture 5

```
library(tidyverse)

plants <- tibble(none = c(4.8, 4.8, 3.94, 4.4,4.5,4.6),
                 nutrients1 = c( 10.1, 9.7, 9.8, 9.9, 9.3, 10.1),
                 nutrients2 = c(14.8, 14.6, 14.8, 14, 13.8, 14.6))

plants |>
  pivot_longer(cols = c(none, nutrients1,nutrients2),
               names_to = "nutrients",
               values_to = "height") |>
  ggplot(aes(x = nutrients, y = height)) +
  geom_boxplot()
```

