Beer Production

Set up working space

```
rm(list=ls())
```

```
library(ggplot2)
library(tidyr)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(patchwork)
library(lubridate)
```

```
##
## Attaching package: 'lubridate'
```

```
## The following object is masked from 'package:base':
##
##     date
```

```
library(hrbrthemes)
```

```
## NOTE: Either Arial Narrow or Roboto Condensed fonts are required to use these themes.
```

```
##       Please use hrbrthemes::import_roboto_condensed() to install Roboto Condensed and
```

```
##       if Arial Narrow is not on your system, please see https://bit.ly/arialnarrow
```

```
library(wesanderson)
library(ggridges)
```

load data

```
brewing_materials <- readr::read_csv('https://raw.githubusercontent.com/rfordatascience/tidytuesday/mas
```

```
## Parsed with column specification:
## cols(
##   data_type = col_character(),
##   material_type = col_character(),
##   year = col_double(),
##   month = col_double(),
##   type = col_character(),
##   month_current = col_double(),
##   month_prior_year = col_double(),
```

```
##   ytd_current = col_double(),
##   ytd_prior_year = col_double()
## )
```

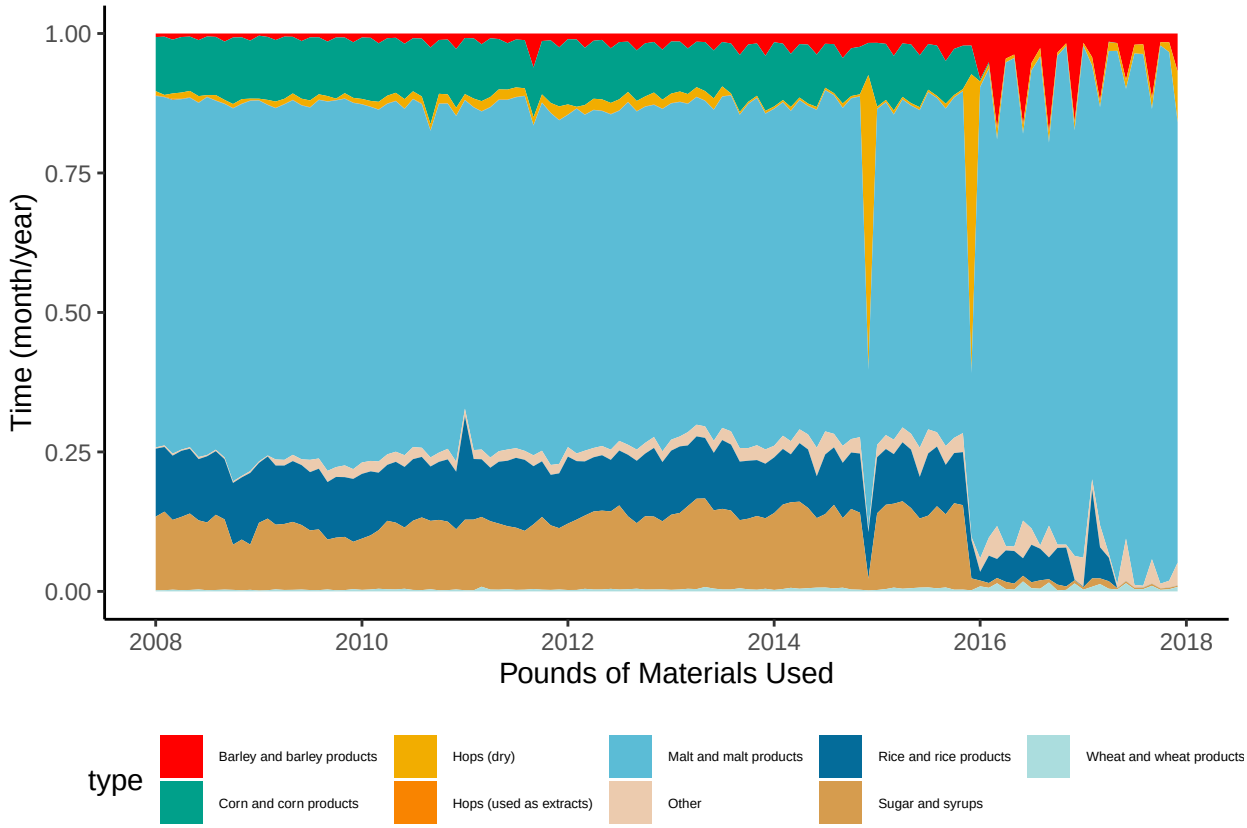
```
head(brewing_materials)
```

```
## # A tibble: 6 x 9
##   data_type material_type  year month type  month_current month_prior_year
##   <chr>     <chr>         <dbl> <dbl> <chr>         <dbl>            <dbl>
## 1 Pounds o~ Grain Produc~  2008     1 Malt~     374165152        365300134
## 2 Pounds o~ Grain Produc~  2008     1 Corn~      57563519         41647092
## 3 Pounds o~ Grain Produc~  2008     1 Rice~      72402143         81050102
## 4 Pounds o~ Grain Produc~  2008     1 Barl~       3800844          2362162
## 5 Pounds o~ Grain Produc~  2008     1 Whea~       1177186          1195381
## 6 Pounds o~ Total Grain ~  2008     1 Tota~     509108844        491554871
## # ... with 2 more variables: ytd_current <dbl>, ytd_prior_year <dbl>
```

```
unique(brewing_materials$data_type)
```

```
## [1] "Pounds of Materials Used"
```

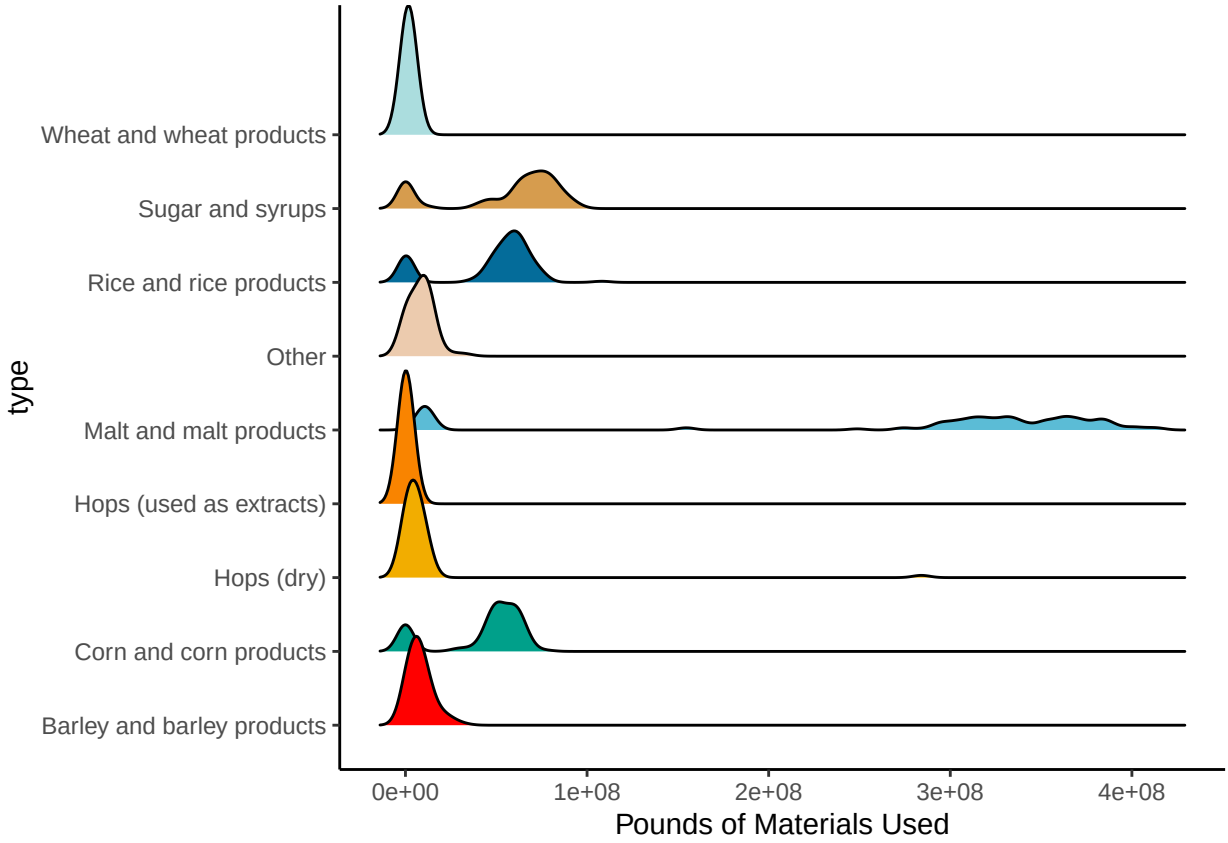
```
type1<-brewing_materials %>%
    mutate(year_month=make_datetime(year,month)) %>%
    select(year_month,type,month_current) %>%
    filter(!type %in% c('Total Used','Total Grain products','Total Non-Grain products')) %>%
    ggplot(aes(x=year_month,y=month_current,fill=type))+  geom_density(color=NA,stat='identity',positio
type1
```




```
type2<-brewing_materials %>%
    mutate(year_month=make_datetime(year,month)) %>%
```

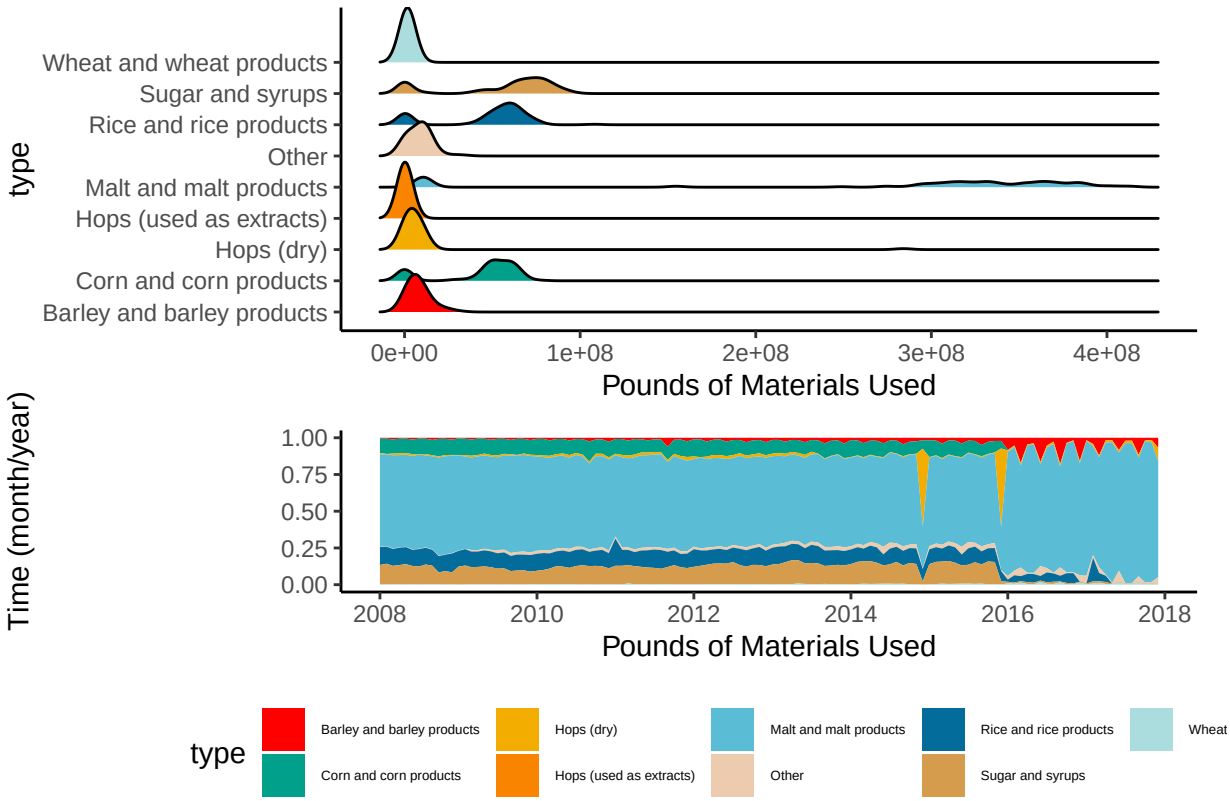
```
    select(year_month,type,month_current) %>%
    filter(!type %in% c('Total Used','Total Grain products','Total Non-Grain products')) %>%
  ggplot(aes(x=month_current,y=type,fill=type)) + geom_density_ridges()+ theme_classic() + scale_fill_ma
type2
```

```
## Picking joint bandwidth of 4670000
```




```
type2 / type1 + plot_layout(heights = c(2,1)) + ggsave('Beer_brewing.pdf',height=5,width=8)
```

```
## Picking joint bandwidth of 4670000
## Picking joint bandwidth of 4670000
```


type
Wheat and wheat products
Sugar and syrups
Rice and rice products
Other
Malt and malt products
Hops (used as extracts)
Hops (dry)
Corn and corn products
Barley and barley products
0e+00
1e+08
2e+08
3e+08
4e+08
Pounds of Materials Used
Time (month/year)
1.00
0.75
0.50
0.25
0.00
2008
2010
2012
2014
2016
2018
Pounds of Materials Used
type
Barley and barley products
Corn and corn products
Hops (dry)
Hops (used as extracts)
Malt and malt products
Other
Rice and rice products
Sugar and syrups
Wheat