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| tle: “Descriptive Analysis of Farmers in SAL-Database” |
| tput: html\_notebook |

library(tidyverse)  
load("Dataframes/si.df.rda")

### Number of Farmers with livestock production on landscape “hills”

nrow(si.df)

## [1] 83

### Number of farmers without and with SPS

NoSPS <- filter(si.df, SPS==FALSE)  
nrow(NoSPS) #Number of farmers without SPS

## [1] 68

SPS <- filter(si.df, SPS==TRUE)  
nrow(SPS) #Number of farmers with SPS

## [1] 15

nrow(SPS)/nrow(si.df) #percentage of farmers with SPS

## [1] 0.1807229

### Summary of key-variables of total dataset

x <- select(si.df, au, area\_total, area\_forest, area\_pasture, area\_sps, stocking\_rate, forest\_reserves, distance, total\_family\_work, total\_contracted\_work, labour, labourperhectare, milk\_cows, milk\_yield, milkperhectare)  
summary(x)

## au area\_total area\_forest area\_pasture   
## Min. : 2.889 Min. : 4.90 Min. : 0.000 Min. : 2.00   
## 1st Qu.: 14.133 1st Qu.: 27.50 1st Qu.: 1.000 1st Qu.: 17.12   
## Median : 22.556 Median : 46.00 Median : 2.000 Median : 28.50   
## Mean : 28.416 Mean : 53.11 Mean : 5.009 Mean : 36.75   
## 3rd Qu.: 34.556 3rd Qu.: 65.00 3rd Qu.: 6.250 3rd Qu.: 49.88   
## Max. :148.444 Max. :250.00 Max. :48.500 Max. :190.00   
## NA's :3   
## area\_sps stocking\_rate forest\_reserves distance   
## Min. : 0.0000 Min. : 0.06349 Min. :0.00000 Min. : 161.8   
## 1st Qu.: 0.0000 1st Qu.: 0.42859 1st Qu.:0.02809 1st Qu.:11776.1   
## Median : 0.0000 Median : 0.72288 Median :0.05810 Median :14876.6   
## Mean : 0.6988 Mean : 1.30052 Mean :0.08943 Mean :15365.9   
## 3rd Qu.: 0.0000 3rd Qu.: 1.42989 3rd Qu.:0.12500 3rd Qu.:20299.4   
## Max. :10.0000 Max. :16.72381 Max. :0.40000 Max. :25536.8   
## NA's :3   
## total\_family\_work total\_contracted\_work labour   
## Min. : 0.00 Min. : 0.00 Min. : 0.300   
## 1st Qu.: 3.00 1st Qu.: 0.00 1st Qu.: 4.625   
## Median : 10.20 Median : 0.00 Median : 14.700   
## Mean : 48.05 Mean : 38.84 Mean : 86.888   
## 3rd Qu.: 25.60 3rd Qu.: 2.00 3rd Qu.: 33.500   
## Max. :799.94 Max. :2520.00 Max. :2520.000   
##   
## labourperhectare milk\_cows milk\_yield milkperhectare   
## Min. : 0.02222 Min. : 1.00 Min. : 1095 Min. : 44.02   
## 1st Qu.: 0.16954 1st Qu.: 7.00 1st Qu.: 9062 1st Qu.: 308.51   
## Median : 0.38158 Median :10.00 Median : 14600 Median : 511.00   
## Mean : 3.42661 Mean :11.27 Mean : 19114 Mean : 688.99   
## 3rd Qu.: 1.33465 3rd Qu.:15.00 3rd Qu.: 25550 3rd Qu.: 847.93   
## Max. :109.56522 Max. :48.00 Max. :105120 Max. :3332.61   
##

### Summary of key-variables of farmers without SPS

summary(select(NoSPS, au, area\_total, area\_forest, area\_pasture, area\_sps, stocking\_rate, forest\_reserves, distance, total\_family\_work, total\_contracted\_work, labour, labourperhectare, milk\_cows, milk\_yield, milkperhectare))

## au area\_total area\_forest area\_pasture   
## Min. : 4.933 Min. : 4.90 Min. : 0.00 Min. : 2.00   
## 1st Qu.: 14.000 1st Qu.: 26.62 1st Qu.: 1.00 1st Qu.: 17.19   
## Median : 22.189 Median : 48.00 Median : 2.00 Median : 28.75   
## Mean : 25.772 Mean : 53.46 Mean : 5.15 Mean : 37.71   
## 3rd Qu.: 30.817 3rd Qu.: 65.00 3rd Qu.: 7.00 3rd Qu.: 50.00   
## Max. :123.356 Max. :250.00 Max. :48.50 Max. :190.00   
## area\_sps stocking\_rate forest\_reserves distance   
## Min. :0 Min. :0.1411 Min. :0.00000 Min. : 161.8   
## 1st Qu.:0 1st Qu.:0.4432 1st Qu.:0.02809 1st Qu.:11663.2   
## Median :0 Median :0.7172 Median :0.06518 Median :14760.3   
## Mean :0 Mean :1.0711 Mean :0.09334 Mean :15055.6   
## 3rd Qu.:0 3rd Qu.:1.1295 3rd Qu.:0.15930 3rd Qu.:19708.5   
## Max. :0 Max. :5.6000 Max. :0.40000 Max. :23024.2   
## total\_family\_work total\_contracted\_work labour   
## Min. : 0.00 Min. : 0.000 Min. : 0.30   
## 1st Qu.: 3.00 1st Qu.: 0.000 1st Qu.: 5.80   
## Median : 11.85 Median : 0.000 Median : 15.60   
## Mean : 50.66 Mean : 9.484 Mean : 60.15   
## 3rd Qu.: 25.55 3rd Qu.: 2.000 3rd Qu.: 31.05   
## Max. :799.94 Max. :387.000 Max. :799.94   
## labourperhectare milk\_cows milk\_yield milkperhectare   
## Min. : 0.02222 Min. : 1.00 Min. : 1095 Min. : 44.02   
## 1st Qu.: 0.17098 1st Qu.: 6.75 1st Qu.: 9125 1st Qu.: 310.68   
## Median : 0.38979 Median :10.00 Median : 14600 Median : 511.64   
## Mean : 2.28159 Mean :11.01 Mean : 18412 Mean : 667.69   
## 3rd Qu.: 1.32697 3rd Qu.:15.00 3rd Qu.: 25550 3rd Qu.: 813.86   
## Max. :40.84500 Max. :48.00 Max. :105120 Max. :2555.00

### Summary of key-variables of farmers with SPS

summary(select(SPS, au, area\_total, area\_forest, area\_pasture, area\_sps, stocking\_rate, forest\_reserves, distance, total\_family\_work, total\_contracted\_work, labour, labourperhectare, milk\_cows, milk\_yield, milkperhectare))

## au area\_total area\_forest area\_pasture   
## Min. : 2.889 Min. : 9.75 Min. : 0.000 Min. : 4.75   
## 1st Qu.: 17.956 1st Qu.: 29.00 1st Qu.: 1.375 1st Qu.: 17.12   
## Median : 35.022 Median : 40.00 Median : 2.000 Median : 28.25   
## Mean : 40.403 Mean : 51.53 Mean : 4.208 Mean : 32.42   
## 3rd Qu.: 44.144 3rd Qu.: 69.00 3rd Qu.: 3.000 3rd Qu.: 36.12   
## Max. :148.444 Max. :133.00 Max. :30.000 Max. :102.25   
## NA's :3   
## area\_sps stocking\_rate forest\_reserves distance   
## Min. : 0.500 Min. : 0.06349 Min. :0.00000 Min. : 6341   
## 1st Qu.: 1.250 1st Qu.: 0.33296 1st Qu.:0.02842 1st Qu.:12820   
## Median : 4.000 Median : 1.00764 Median :0.04026 Median :19714   
## Mean : 3.867 Mean : 2.34061 Mean :0.06724 Mean :16772   
## 3rd Qu.: 4.500 3rd Qu.: 1.75084 3rd Qu.:0.05893 3rd Qu.:20891   
## Max. :10.000 Max. :16.72381 Max. :0.34884 Max. :25537   
## NA's :3   
## total\_family\_work total\_contracted\_work labour   
## Min. : 0.00 Min. : 0.0 Min. : 1.000   
## 1st Qu.: 4.00 1st Qu.: 0.0 1st Qu.: 4.125   
## Median : 4.25 Median : 0.0 Median : 8.000   
## Mean : 36.19 Mean : 171.9 Mean : 208.121   
## 3rd Qu.: 25.41 3rd Qu.: 0.0 3rd Qu.: 42.625   
## Max. :370.00 Max. :2520.0 Max. :2520.000   
##   
## labourperhectare milk\_cows milk\_yield milkperhectare   
## Min. : 0.03963 Min. : 1.0 Min. : 2555 Min. : 128.4   
## 1st Qu.: 0.16555 1st Qu.: 8.0 1st Qu.: 8030 1st Qu.: 300.5   
## Median : 0.33333 Median :12.0 Median :20075 Median : 486.7   
## Mean : 8.61735 Mean :12.4 Mean :22297 Mean : 785.6   
## 3rd Qu.: 1.37617 3rd Qu.:14.5 3rd Qu.:27375 3rd Qu.: 894.2   
## Max. :109.56522 Max. :35.0 Max. :76650 Max. :3332.6   
##