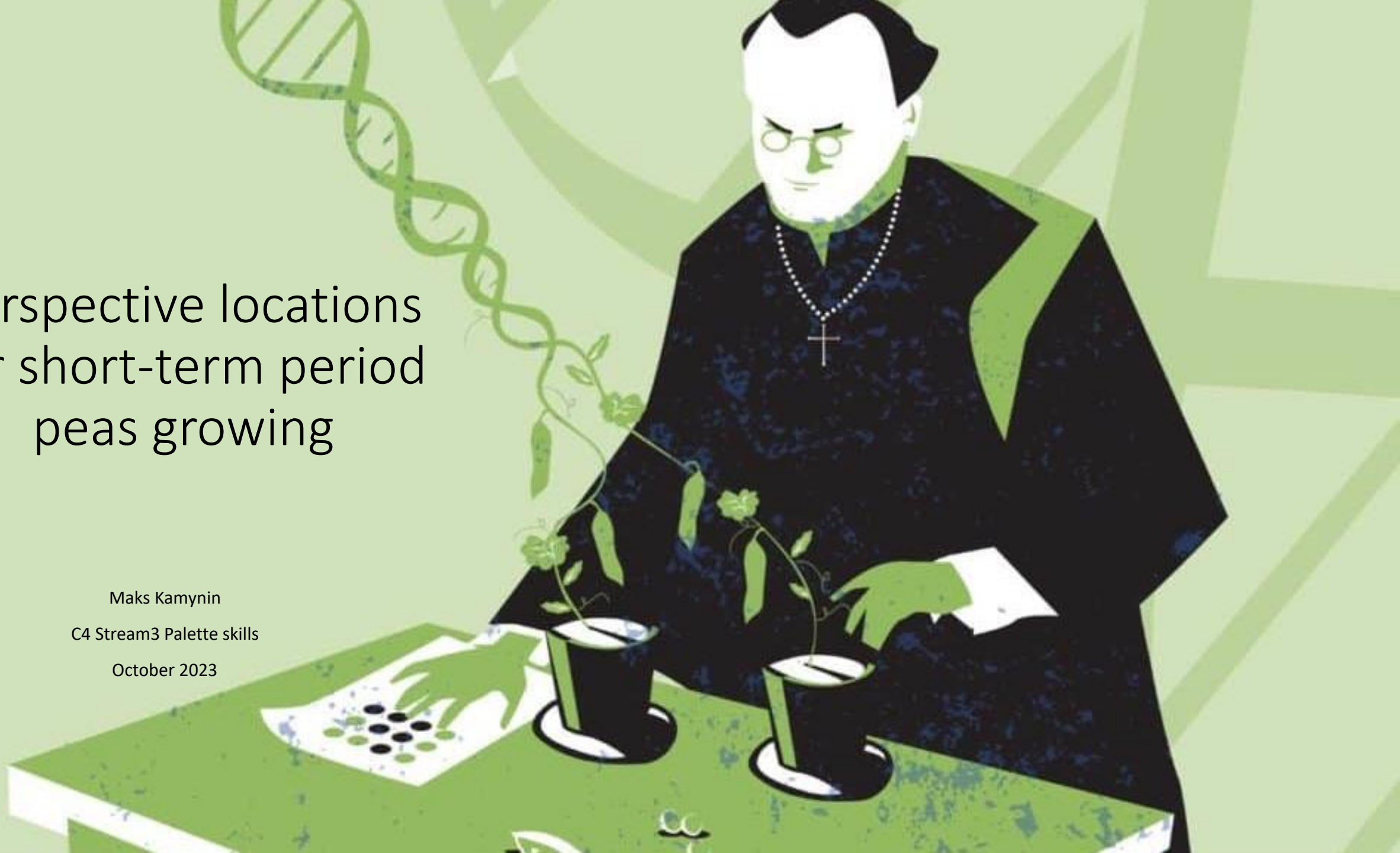# Perspective locations for short-term period peas growing

Maks Kamynin

C4 Stream3 Palette skills

October 2023

Situation

Mid size family farm company

Experienced in Peas growing in USA

Want to enter the Canadian market
and looking for short/mid-period rent land
in SK and MB according to
the government support program

Action plan

Get data from open sources about the yield of Peas in the SK and MB regions
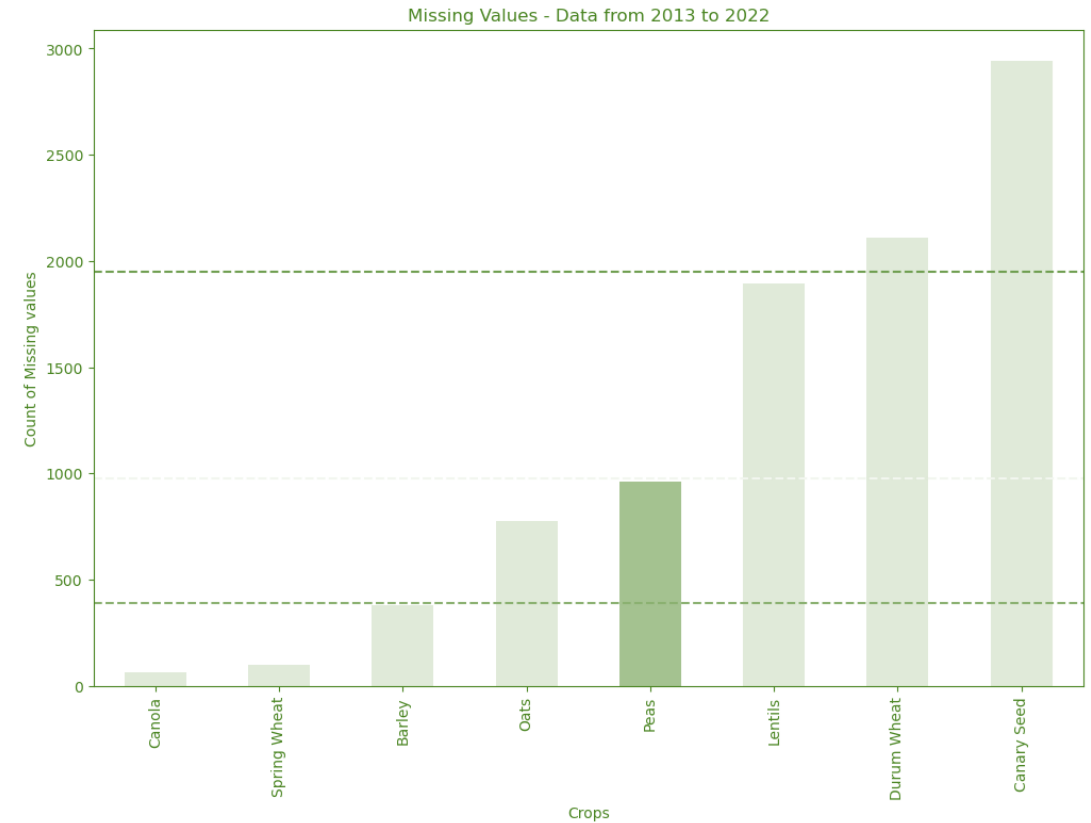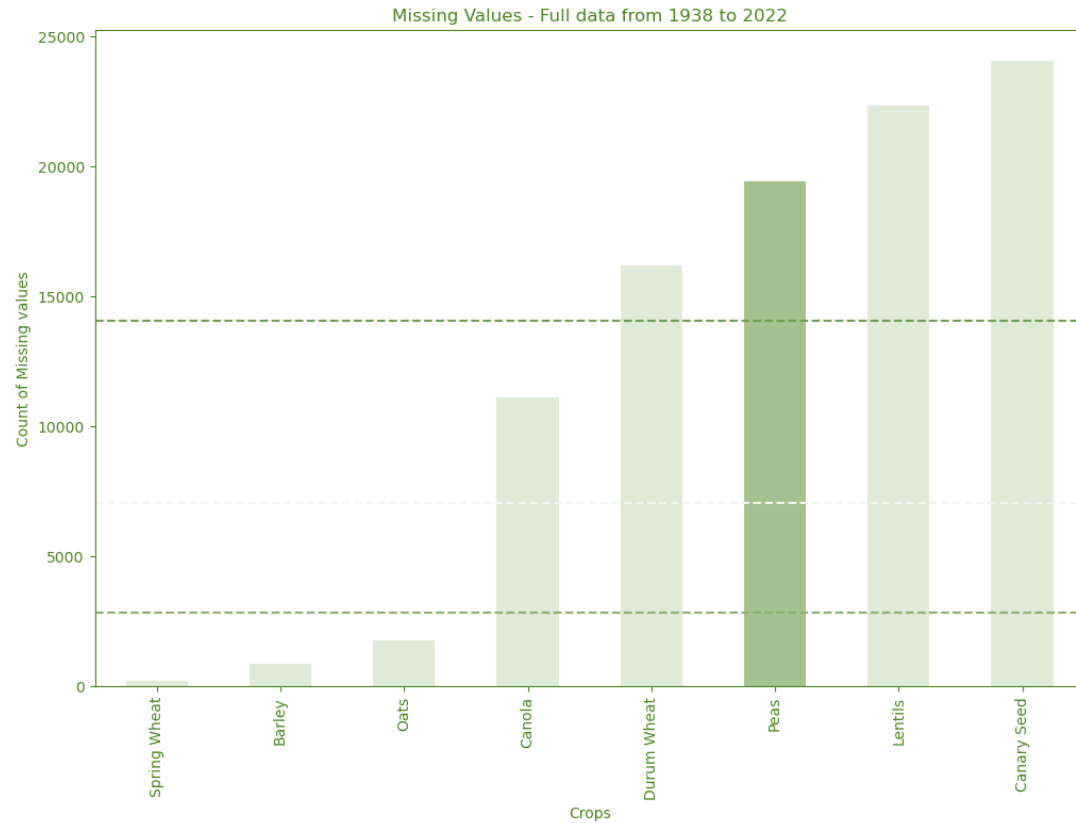
Analyzed data according to history, territories, trends and yield of crop

Make a list of territories for potential renting for 10+ years

Data quality

Missing Values - Full data from 1938 to 2022

Missing Values - Data from 2013 to 2022

Focused on the last 10 years of data
Some of the data is missing

Territories for analysis

Peas Yield in 2014 • Peas Yield in 2015 • Peas Yield in 2016
Peas Yield in 2017 • Peas Yield in 2018 • Peas Yield in 2019
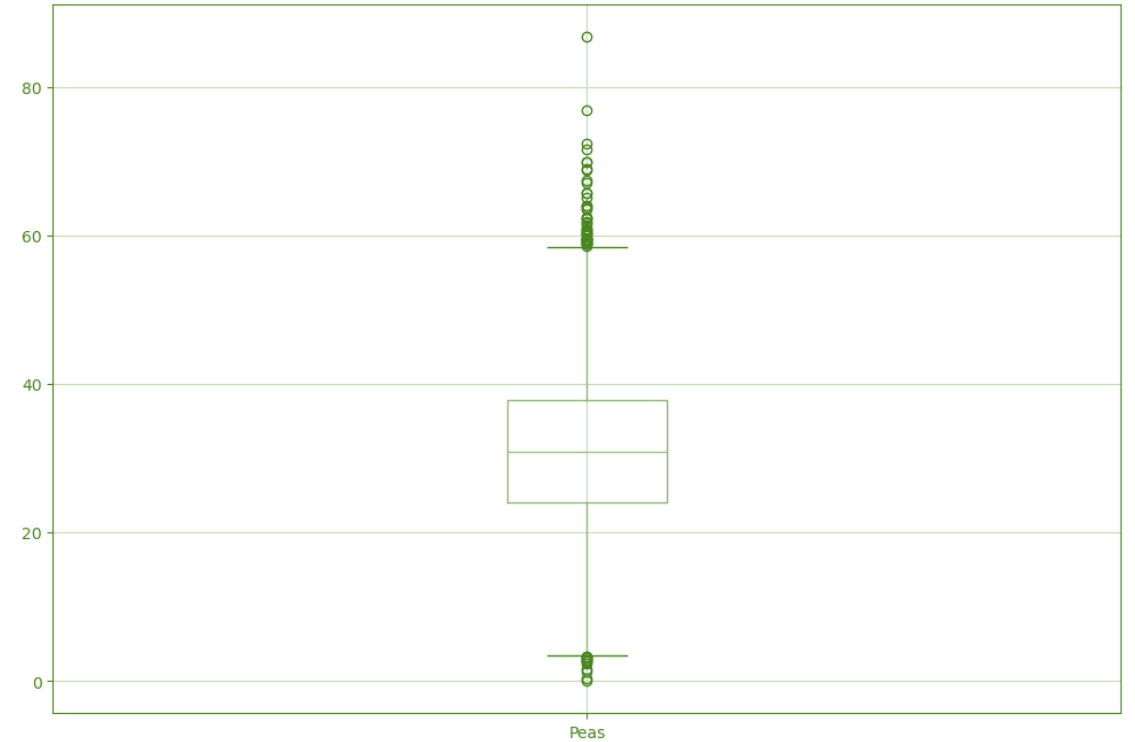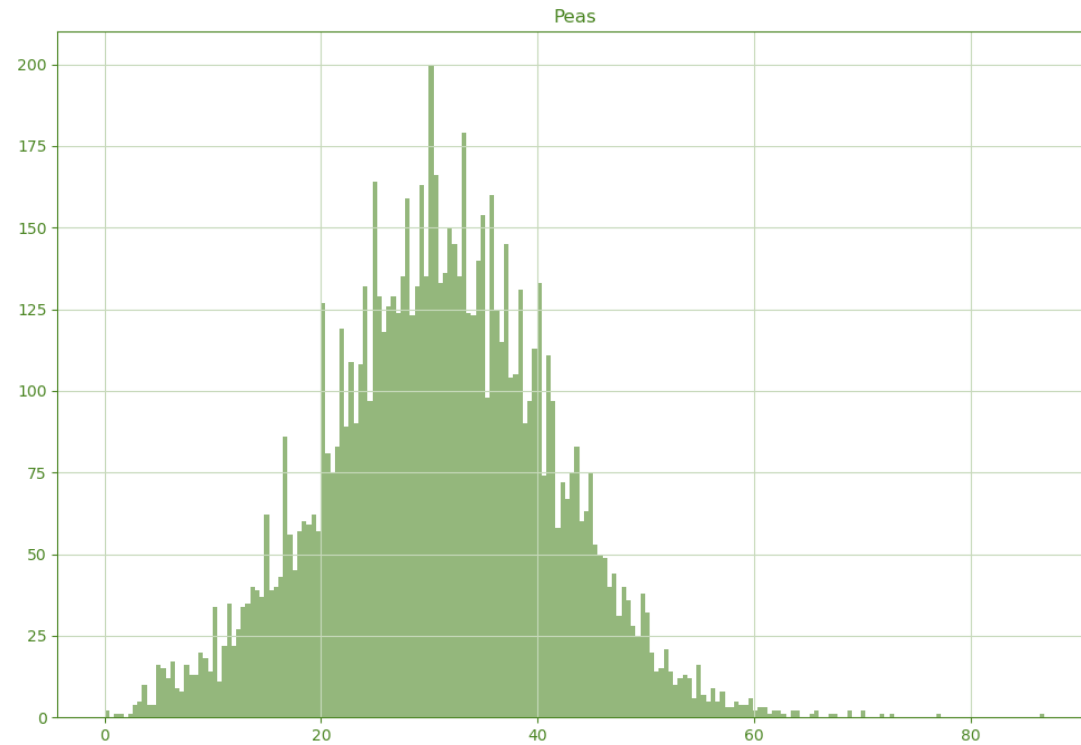Peas Yield in 2020 • Peas Yield in 2021 • Peas Yield in 2022

Most missing data from the Manitoba region

Results are different from year to year

Outliers of data
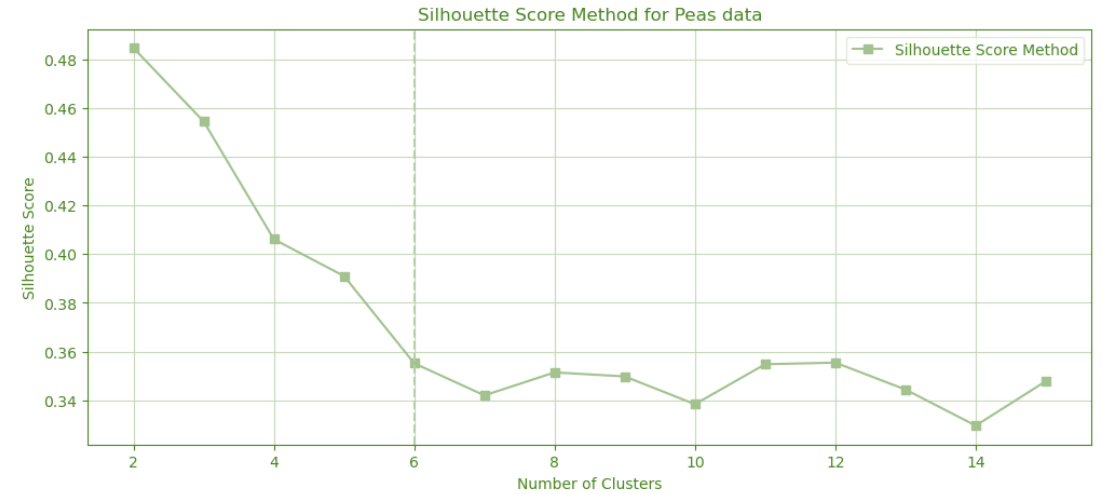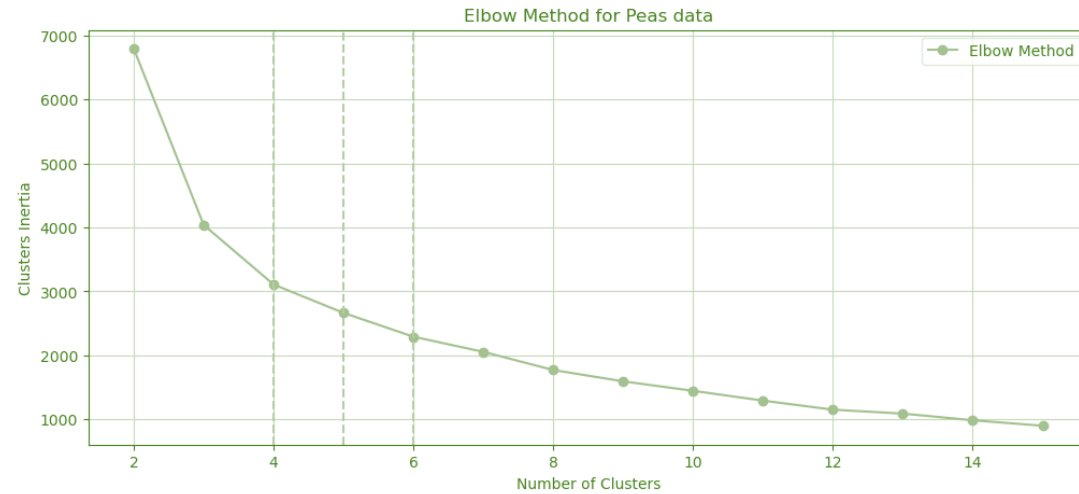

The shape of the histogram is appropriate for the next analysis
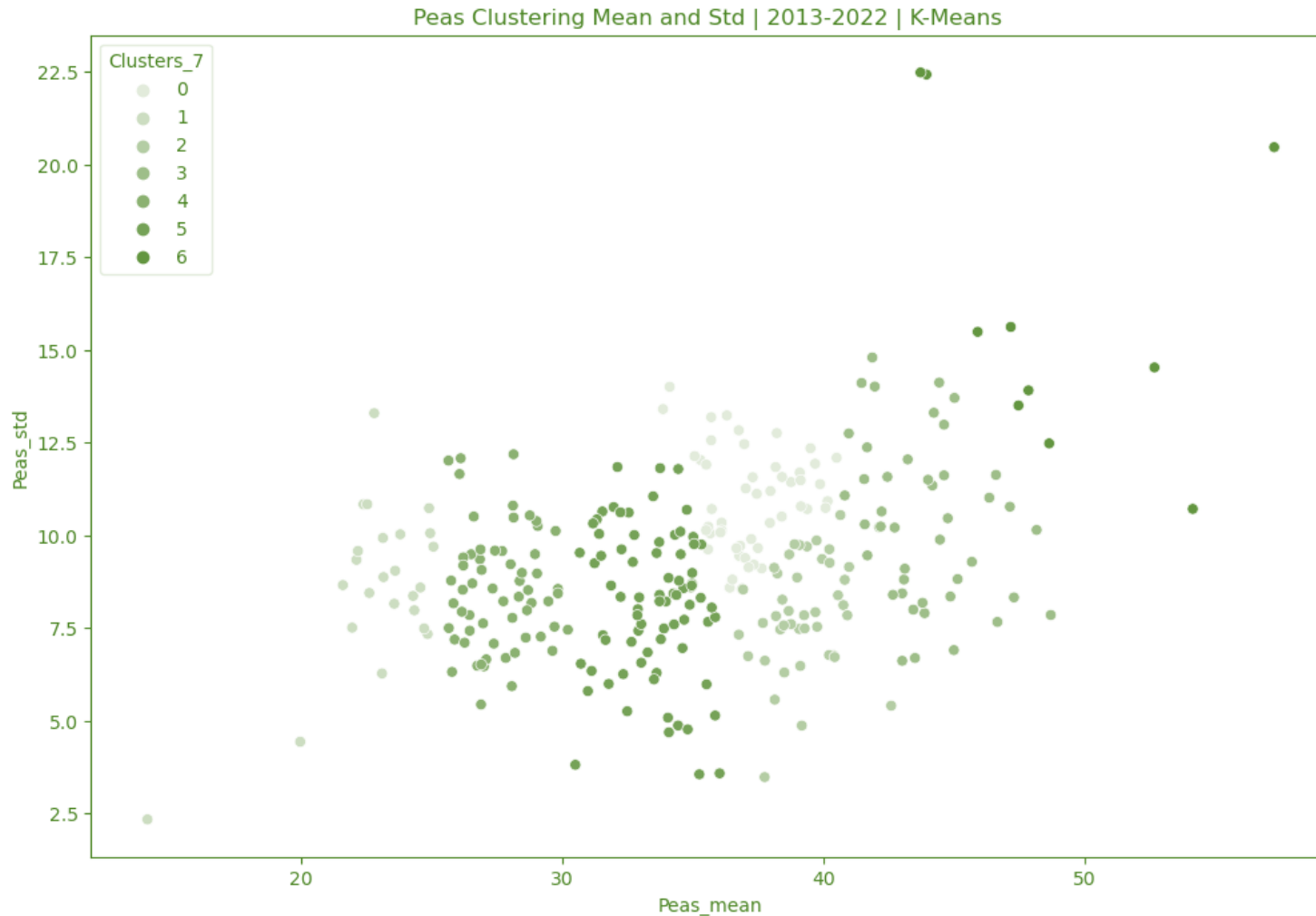Extreme outliers are insignificant

Clustering

Determining the optimal number of clusters: Elbow and Silhouette methods
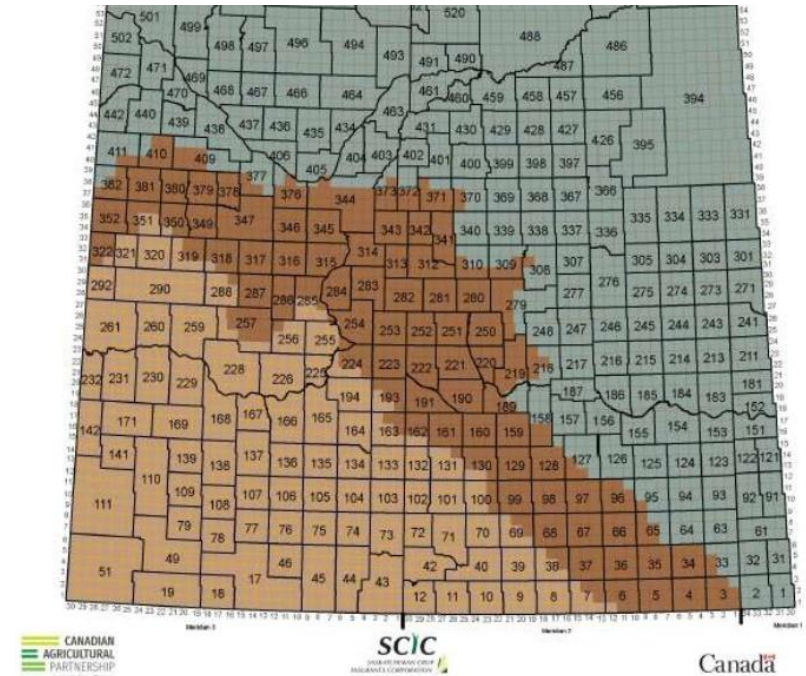Optimal number of clusters is from 5 to 7

Yield by clustering
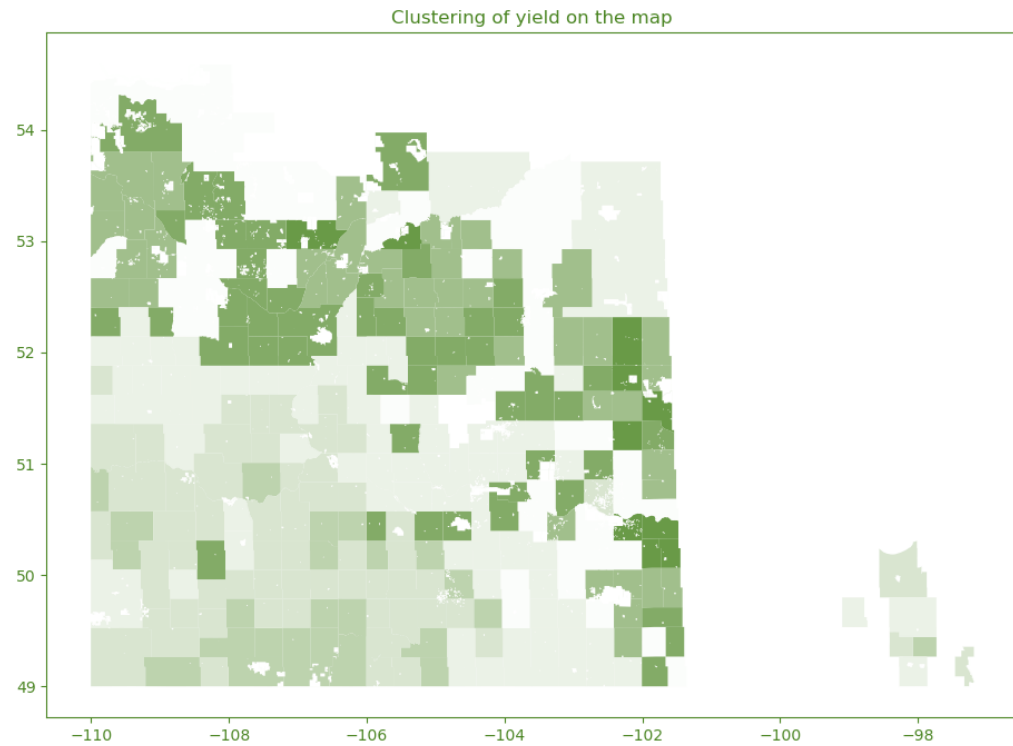

Peas Clustering Mean and Std | 2013-2022 | K-Means

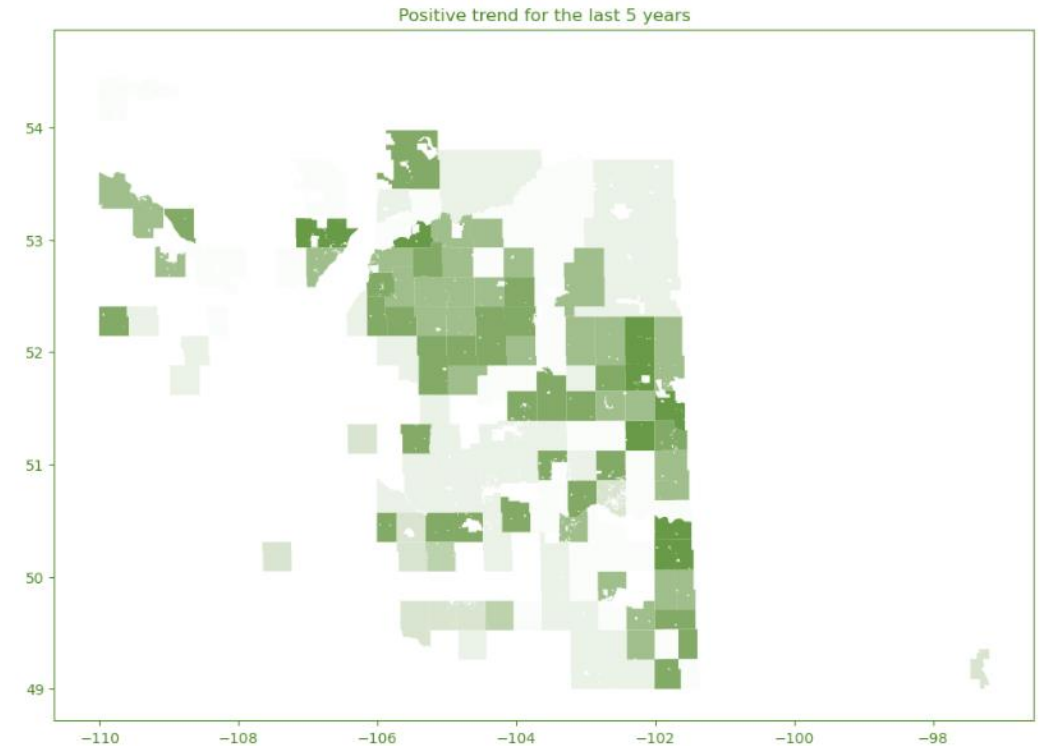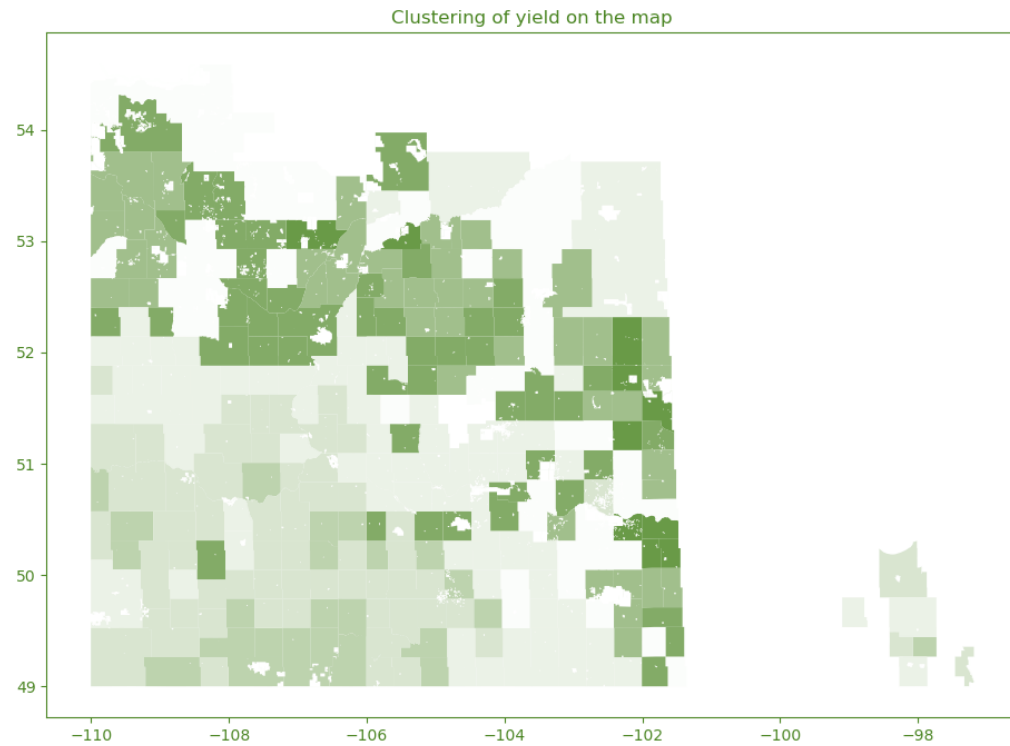The top cluster is not so stable
Better focused on the top two

Yield on the map

Split of yield by cluster on the map
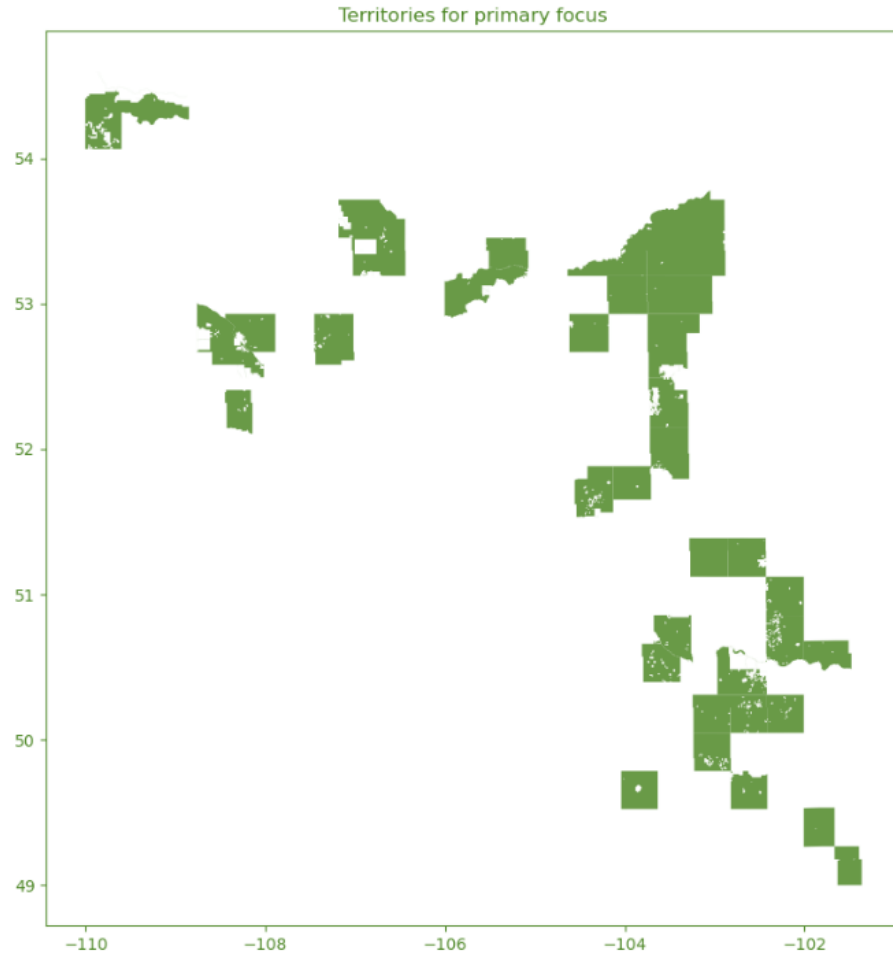The analysis results are similar to the soil map of the region

Positive trend

Clustering of the yield as a basis
The positive trend of the last 5 years

Final result

Territories for primary focus

39,14 mean yield for that region
The next cluster result has 16% less value

List of the territories for short/mid renting:
95, 378, 426, 245, 1, 125, 336, 366, 123, 124,
67, 32, 308, 438, 213, 307, 486, 487, 244, 437,
494, 490, 186, 154, 64, 156, 152, 435, 457, 456,
183, 428, 622, 461