DSO 545

Team: Agricultural Research

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**Final Report**

We would like to do an overview on Global Agricultural Production, since agricultural product is highly related to people’s daily life. People need to eat food everyday. How price of the food is changing highly affects the agricultural productions and poverty. We would like to do some data analysis to found out what factors affect the food price and productions, how are more related factors are affected each other in agricultural, and how agriculture and poverty are related.

It also helps us refine and expand our consumer and business target audiences so farmers are able to concentrate on those with the greatest growth potential.

**Project Description**

First, we need to know the background information of a general agricultural production world. We would like to answer the following questions:

* What kind of crops are mainly yield?
* Which country produce which types of crops?
* How is main crops’ prices are changing (high,low)?
* Demographics of farmers (Age, Race, Gender)
* Production Efficiency (Yield/Person or Yield/Acre)
* Organic ?

Then, we would like to do an Analysis about potential factors that will affect the agricultural productions and food price, including climate change, oil price, bio ethanol, and financial market, etc. We would like to dig into the deep to try to find the exact relationships between these factors and the results, and try to summarise the real life situations behind the data, and help better predict the future moving of the food price.

Finally, we woulike to see the agriculture and poverty relationships, try to see how to potentially using the above found from the analysis to help improve the poverty. We would like to answer the following questions: (a) Production and poverty(Poverty rate, Household Income, GDP), (b) Food Export/Import and poverty.

In conclusion, we would like to show a clear understanding of the Global Agriculture Production pictures, and see how to predict the food price and production changing, and find the relationship between the production and poverty, and see if we could help improve the poverty through the founds from the data analysis.

**List of Dataset(s) used**

- Crops: Food and Agriculture Organization of the United Nations (FAO) <http://www.fao.org/faostat/en/#data/QC/metadata>

- FAO fertilizers data, production indices, food price index <http://www.fao.org/worldfoodsituation/foodpricesindex/en/>

- Share of the population that is undernourished : <https://ourworldindata.org/hunger-and-undernourishment#prevalence-of-stunting-by-household-income>

- The prevalence of undernourishment

- Depth of the food deficit (kilocalories per person per day)

- Global Hunger Index

<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2016&start=1960>

<http://www.fao.org/faostat/en/#data/PP>

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