

Ag Resources Comprehensive Report

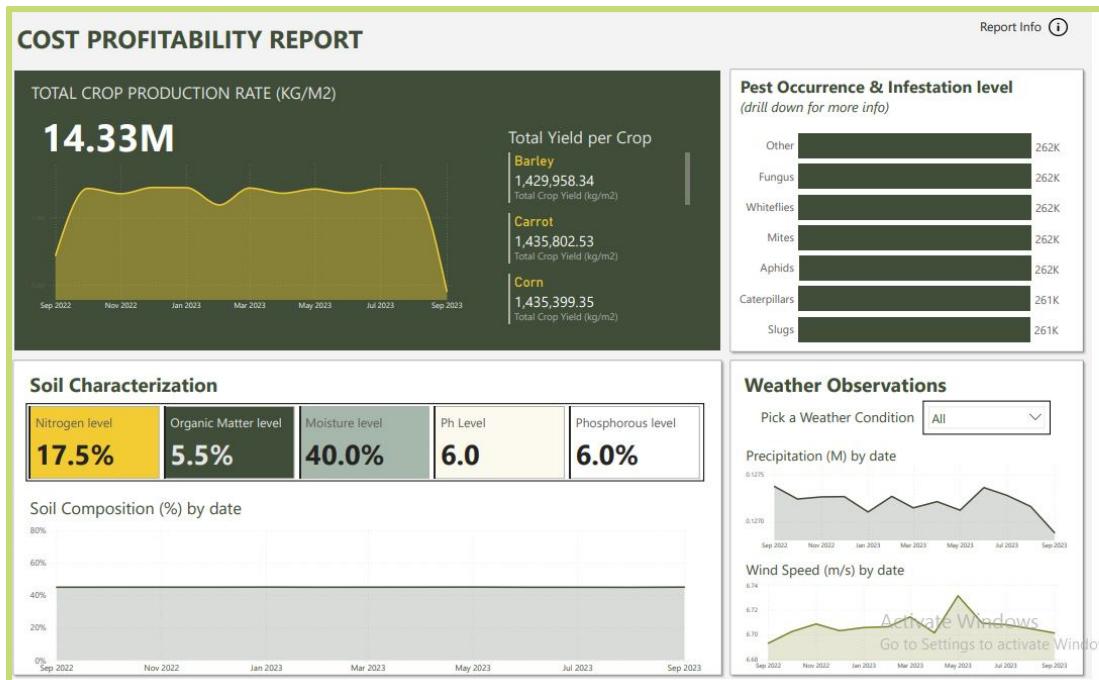
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Key Findings

- **14.33 million** total crop production rate.
- **17.5%** nitrogen level.
- **10** crops produced.
- **6.0** soil Ph. level.

Overview of Data



- An overview of the AG resource Inc. data.

From the data above, we can see that the **3 top crops** are Barley, Carrot and Corn with over **1.4 million** in production.

Crop production and market size



Around 2.3 billion metric tons of grain will be produced worldwide in 2021, including wheat, rice, corn, barley, oats, rye, sorghum, and other grains. Among the most significant grains produced worldwide, corn claimed the lead with a production volume of about **1.2 billion metric tons**.

With almost **80 million acres** set aside for corn harvesting in 2022, the United States alone is responsible for nearly one third of the world's maize production. Together, the United States and China produce more than half of the world's grain. In 2022, China produced more corn than **277 million metric tons** (Corn Industry Worldwide, n.d.). Interestingly, corn is also used in biofuel industry and this one industry that AG resources can tap into by partnering with renewable energy companies across the world.

Risks Assessment

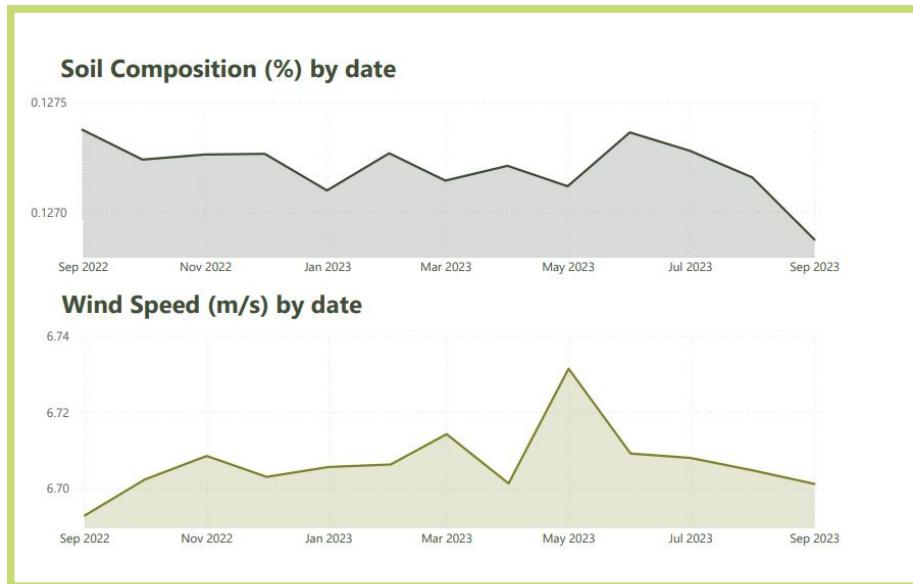
The agricultural industry is one that is very sensitive and its important to take note of various risks and how to control/avoid them. Wide fluctuations in agricultural revenue may result from the unpredictability of the weather, yields, pricing, government regulations, international markets, and other factors that affect farming. Choosing among options that lessen the potential financial effects of these uncertainties is part of risk management.

Climate change and its effect on crop yield



According to the [World bank](#), climate change has an impact even in the agricultural sector. Agro ecosystem borders are shifting, invasive plants and pests are becoming more prevalent, and extreme weather events are occurring more frequently as a result of climate change. Crop yields, the nutritional value of main grains, and livestock output are all declining on farms as a result of climate change. Maintaining existing yields and increasing production and food quality to satisfy demand would need large investments in adaptation (World Bank, n.d.).

How wind speed affects crop yield and how we can manage this risk



- Graph of soil composition by date and wind speed by date.

From the data above, we can see that the wind speed fluctuates within the year. We can also observe a high peak during the month of May. In high winds leaves can be stripped from plants and in intense conditions the roots can be uprooted. It is important to invest in a wind protector to avoid sudden loss in produce (Komarek et al., 2020).

Pest occurrence and infestation



Pest occurrences have a high impact on the crop yield and profitability. In the above chart, we can see that there is a high number of pest occurrences. This can lower product quality thereby leading to a great loss in sales.

Long Term Planning

Goal 1: Implement a technologically-enabled factory by January 2024.

Objective A: Hire 2 agric-tech experts.

Objective B: Provide training for farmers on pest identification, occupational safety and health practice in the work place.

Objective C: Provide training for unit leaders to learn about top practices in the agricultural sector as well as management practices.

Objective D: Rebranding to position AG resources as a global agricultural company. Attend networking events to connect with business leader and agricultural experts

Goal 2: Implement the use of artificial intelligence to detect pest infestation at an early stage by August 2024

Objective A: Mounting 10 field censors at strategic areas in the farm for early detection of pests in the farm

Objective B: Reducing the already existing pests by 80% by December 2024

Goal 2: Establish partnerships with strategic organizations by March, 2025

Objective A: Partner with renewable energy companies to provide raw materials for production of biofuels.

Objective B: Partner with large chain supermarkets, food processing companies and government bodies to increase sales of crops.

Recommendations

- We recommend the use of the flood and lake irrigation method.
- Considering the instability of the weather. We recommend that AG resources look into green house farming methods to enable all-year round production.
- Consumers have become more conscious of eating health. AG resources can partner with long chain supermarkets and grocery delivery and food processing companies.
- We recommend that AG resources should expand their reach to Europe where grains especially barley is becoming in high demand (Barley Profile | Agricultural Marketing Resource Center, 2016).

References

Barley Profile | Agricultural Marketing Resource Center. (2016). Agmrc.org.
<https://www.agmrc.org/commodities-products/grains-oilseeds/barley-profile/>

Corn industry worldwide. (n.d.). Statista.
<https://www.statista.com/topics/7169/corn-industry-worldwide/>

Komarek, A. M., De Pinto, A., & Smith, V. H. (2020). A review of types of risks in agriculture: What we know and what we need to know. *Agricultural Systems*, 178, 102738.
<https://doi.org/10.1016/j.agsy.2019.102738>

World Bank. (n.d.). Climate-Smart Agriculture. World Bank. Retrieved September 30, 2023, from
<https://www.worldbank.org/en/topic/climate-smart-agriculture#>