**Abstract:**

The agricultural sector was doing well in Post Independent India, but today it has lost its glory. As farmers continue to use traditional methods for cultivating their land, the growth rate has not seen an improvement. Bad harvest and high debts have pushed farmers to commit suicide. Lack of innovation and usage of technology is another reason for the failure. We have come up with an innovative solution to tackle the struggles faced by Indian farmers.

Inspired by lean manufacturing processes, we have integrated innovative techniques to help the farmers. As they are not able to sell their produce for the right price due to fluctuating demand, we are developing a software that will recommend the farmers the appropriate crops to be cultivated and the exact amount to be grown based on local and national demand. While increasing the profit of the farmers, yield will be enhanced due to the benefits of organic farming. An irrigation system based on IOT that will regulate the water supply to the crops, in the process, saving and conserving water is also developed. A direct supply chain involving cool cargo will also be used to improve farmer to customer sales.

With most of the countries using latest technologies and methodologies for improving their agricultural sector, it’s high time that India also adapts to this ever growing and competitive industry. On using our methodology, Indian farmers will be able to cultivate crops based on market demand and value. This will reduce the wastage of the precious food grown by the farmer and will provide them with the desired revenue from their harvest. Moreover, the productivity of the farms will see a drastic improvement, in turn, reducing the degradation of the soil.

**Introduction:**

Post-independence, the agricultural sector was the highest contributor towards the country’s GDP at 51.8%. But at present, this sector which employs nearly 52% of the total work force in India, is facing a crisis and contributes only 17-18% towards the country’s GDP. (reference)

This huge dip in GDP has been caused due to various factors affecting the agricultural process right from the investment received to the supply chain of the agro-produce.