

INITIATING IT TECHNIQUES TO ACCELERATE MARGINAL FARMER GROWTH

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ABSTRACT

The purpose of this study is to improve the development of agriculture by introducing IT techniques. Discrimination between rich and poor is always a big debate that we all are undergoing in our day-day life and also there are a lot of solutions and ideas that had undergone and will undergo in future. Imagine why we are pointing out and expressing our solution and ideas to eradicate the discrimination between rich and poor? A question arises. The reason behind this is, it's a problem, so we are coming out with a solution. But why I stressing on this means, bringing out a solution is for the development and up come of the people's life, is the first and foremost thing, most of us forget at a times. Implementing and the widespread of the solution/product among the people, if it prospers the life of the people is the real success behind the solution in general. In this article we are going to focus about the crisis facing by the marginal farmers and how to make a stable economic growth through IT technologies to maintain a proper flow of lifestyle in their lives too and a solution for the marginal farmers to overcome from their crisis and the implementation techniques.

Keyword: - IT techniques, agriculture, marketing.

1. INTRODUCTION

“The term Marginal farmer and small farmer implies who developing as proprietor or occupant or tenant farmer, horticultural land up to 1 hectare i.e 2.5 acre”[1]. Cultivating over a small area which makes the life of the small farmer vulnerable and is not economically feasible. In case if some labors are working under these marginal farmers, these marginal farmers will have the responsibility of giving them wages, also will have the burden of taking care of his own family and also the labor's family too! by giving him wages, so that the labor can run his routine life.

So we get a clear idea about the fact that the marginal farmers who are the owners of his small land ,altogether work over his field and what they had cultivated, they will sell it to the market at some reasonable amount, the quantity will won't be that much more, since it had been cultivated over a small area. At last, the amount gained also will be

less, he will divide that amount and distribute to other labors who work under him and the amount won't be much sufficient to fulfil his family commitments.

2. EXISTING METHODOLOGY

Today's agriculture routinely uses sophisticated technologies such as robots, temperature and moisture sensors, aerial images, and GPS technology. These advanced devices and precision agriculture and robotic systems allow businesses to be more profitable, efficient, safer, and more environmentally friendly. Innovation is more important in modern agriculture than ever before. The industry as a whole is facing huge challenges, from rising costs of supplies, a shortage of labor, and changes in consumer preferences for transparency and sustainability. There is increasing recognition from agriculture corporations that solutions are needed for these challenges. In the last 10 years, agriculture technology has seen a huge growth in investment, with \$6.7 billion invested in the last 5 years and \$1.9 billion in the last year alone [2]. Major technology innovations in the space have focused around areas such as indoor vertical farming, automation and robotics, livestock technology, modern greenhouse practices, precision agriculture and artificial intelligence, and blockchain. In recent years, the adoption of digital technologies in precision agriculture has been adjusting the ways that farmers treat crops and manage fields. One doesn't have to be an expert to see how the technology has changed the concept of farming making it more profitable, efficient, safer, and simple [3]. Among other technologies, farmers have picked five they deem to be the best:

- 1) GIS software and GPS agriculture
- 2) Satellite imagery
- 3) Drone and other aerial imagery
- 4) Farming software and online data
- 5) Merging datasets



Fig -1: GIS software and GPS agriculture [4]

The next valuable feature that employs numerous data sets is weather data analysis. It is comprised of the following options:

"Winter slaughter" educates you concerning the temperature change that undermine your winter crops.

"Cold pressure" features the days when the temperature brought underneath - 6°C down to make the harm early yields from ice.

"Warmth stress" tells the days with temperatures above +30°C that can harm from heat pressure [5].

This methods provides the ability to monitor precipitation as well as temperature .

3. PROBLEMS FACED BY THE MARGINAL FARMERS

With using of these IT techniques and methodology, farmers made their fields, additionally products becoming levelled up and gain more advantages from the great one which was introduced for enhancing our modern agriculture. Moreover, most of the marginal farmers and small-scale farmers having trouble to afford this, because of poverty and insufficient economic financial problematic condition of their lives. In spite of poverty, let we take tremendous measures including do some changes in this field is the essential for our country wealth. This good stuff makes people to get rid of poverty trap. In sense of these conditions, we created ideology in concern with affected farmers however us intend to distribute this valuable message into society and make awareness of changing the worst situation of suffering farmers about economic status which is necessarily for farmers although we look insight of nations wealth too.

3.1 LACK OF LITERACY

We can't come to an conclusion that all the marginal farmers are literate or illiterate, but most of the farmers are illiterate who has practical knowledge more than the theoretical knowledge so that they can't cope up with the technologies .The main thing is that these technologies are not widespread to them and what is the responsibility of We literates is just to make aware of the technology and make them to understand the convenience behind the technology. Similarly, farmers are superstitious, traditional, they won't easily accept the challenges and inventions. If we youngsters take this initiative definitely, we can bring a change to this problem.

3.2 SEASONAL CHANGES

There will be a particular demand for a particular crop during certain season over a particular area. The crop yielding also depends on that. If we took a close look at this issue, how it affects the life of the marginal farmer means, in a year there will be 12 months, we can divide it into equal months. Predict in first 6 months there is a suitable season for a crop to cultivate, a marginal farmer cultivates the crop and he will sell it to the market and gain some money. But the rest of the 6 months he uses the money which he had gained for the past six months for his family commitments, giving wages etc., There won't be the appropriate season to cultivate the same crop in the same land. So, what the farmer will do is, he will turn as a business man for the rest of the 6 months with the amount he had earned over the past 6 months. Further, for the next year he will borrow money and continues the same cycle what I had mentioned above. Accidentally, if there are any obstacles in this flow of cycle, everything will be entirely collapsed in a marginal farmers life, which may take him into a depression state and commits suicide.

4. PROPOSED METHODOLOGY

Our idea is of making an application which will definitely overcome all these problems faced by the marginal farmers which we had mentioned above.

4.1 YOUNGSTERS ARE THE INVESTORS

Making our "Young Youths" who are the pillars of our" Future India" are the investors, not only the youngsters who are all Interested in investing in agricultural field. As many of them usually says "My dream is, after getting a job I will turn as a farmer" but it's quite rare case [6]. Instead in this application we are giving an open platform to be directly get connected with farmers and be a part in their hard work and pains incase if there is any wanted of money for the farmers and in turn the investors receives the share for what they had invested after the farmers yielding.

4.2 COLLABORATING SMALL FIELDS TOGETHER

The main advantage of collaborating small fields together in this application will reduce the burden of the farmer, because during a certain season if the yield is not that much good, the farmer can exchange as a points (no cash) that the farmer 1 (buyer) had earned in his previous yield with other farmer 2 (seller) as a goods with whom he like to have deal with, where the buyer can do business even if the yield is not good for that season. The exchange will be of goods and the points, no cash had been involved in this case. The ancient idea named Barter System which we are going to brought into the existence in this era. If the farmer 1 (buyer) has money instead of goods, there is an option of converting money to points and now he can exchange the products with another farmer 2 (seller) and the points will be credited to farmer 2 (seller), if he wish to retrieve it or else he can left it out with points.

4.3 PLATFORM IS OPEN TO ALL COMMON PEOPLE

If we are non-farmers or a common people can also play a vital role, if He/she is interested in buying the goods for their own business. But this application mainly focused to up come and prosper the life of the marginal farmers. So, we common people can also purchase in this platform, but the price or points of the product will be slightly high for the non-farmers or common people not that much extent, there is no need of panic condition, it's definitely going to be a reasonable price. In what basis we will sort the Farmer Vs Non-Farmer is, each farmer will have a unique farmer ID issued by our government, by using that we will sort them out [7]. How the prices for the goods and the points will be fixed we can see detailed explanation down below.

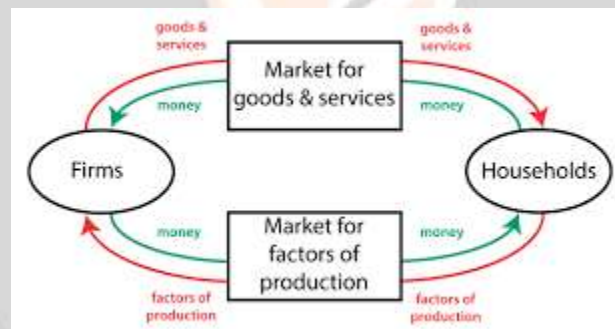


Fig 2: Marketing cycle

4.4 FACTORS OF PRODUCTION:

In this case let us consider initially the upper part of the cycle. Predict the households as a farmer who is cultivating and then the crop will send to the market, to make it as a finished one. These intermediaries will pass it over to the firm and it will be prepared as a fully finished one and then it will come back return to the common people, as well as the farmers with the high pay of cost. This is quite tough for the farmers as well as the common people like us. Because we human nature is no one will wish to buy the same thing that he is selling and in turn buying the same thing as high cost makes very hard, especially in marginal farmers life. So, without any intermediaries if we make a platform to deal a business with farmers-farmers it will definitely prosper the life of the farmer too. We are buying the things normally in our market with high cost instead we just spending 5% more than the actual amount where both the common people and the marginal farmers can be benefited without any intermediaries.

5. CONCLUSION

By using all our skills what we had learnt these many days, also had a study about the existing technologies, we had applied our knowledge and come up with this concept which will be really user friendly if come into existence for the marginal farmers especially. Finally, we conclude by saying that we Youngsters formulate together, surely, we can make a change, being as a precedent for our future generations. Because, technology is in our hands, we can turn even hardships into small broken pieces into these marginal farmers life too!

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