
AN ANALYSIS OF SMALL SCALE FARMING

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ABSTRACT

Tiny-scale farming refers to the practice of farming on a small plot of land. Aside from the many advantages of small-scale farming, such as increased production, better quality, and more employment, it also has significant disadvantages, such as financial instability, lower profit, and a high health risk (because most of the work has been done manually). Because the food produced by small-scale farming is of such excellent quality, there is a strong demand for it, which leads to better health. This review article addressed the difficulties and possibilities of small scale farming by examining all elements of the small scale farming. It will also investigate every varied component connected to small scale farming, such as its characteristics, advantages, demerits, and challenges. Because small-scale farming requires less equipment (and thus more manpower), it is critical to promote small-scale farming as a means of generating employment in rural regions in the near future.

KEYWORDS: *Crop, Farming, Food, Small Scale Farming, Small Scale Farmers.*

1. INTRODUCTION

Because it supplies food for survival, farming has been regarded a cornerstone of our civilization for thousands of years. It makes use of natural resources such as land, water, and light in order to generate food. For many years, people have used tiny plots of land to produce food for their family and others close to them. Tiny-scale farming is the practice of farming on a small piece of land. Small-scale farming is often carried out by small farmers in rural regions due to a lack of capital. With the passage of time, the world's population grows dramatically, increasing the need for food. The need for food leads to the establishment of commercial agriculture. Commercial farming is often done on big plots of land and produces food for society rather than for individual households. Profit is a factor in commercial farming. It generated a huge amount of food for civilization, but the most frequent problem connected with industrial farming is poor food quality. Chemical pesticides and plant growth regulators are used in commercial farming to produce food, and they have negative health and environmental consequences(1).

Small-scale farming, on the other hand, provides high-quality food because it utilizes bio-fertilizers and self-grown seeds to create high-quality crops. Most individuals nowadays have unhealthy lifestyles that include little physical exercise, a high intake of junk food, and a stressful work life, all of which contribute to ill health. People in metropolitan areas primarily eat food produced by commercial farming; commercial farming produces food with less nutrients, resulting in nutritional deficiency in the body. People nowadays value their health above all else, which is why they seek for nutritious foods. The increasing demand for high-quality food propels small-scale farming in a favorable direction. Small-scale farming relies on biological components to develop crops, which is why the food produced by small-scale farming is nutrient-dense. Small-scale farming has a number of advantages, including better supervision (because to the fact that it is done on a small piece of land), more employment (due to the fact that it uses less machinery), more productivity (due to the high cropping rate), and the ability to react quickly (because it is

easy for the owner or farmer to take quick decision in frequent weather and climate change condition for relatively small land farm).

Aside from the many benefits, small-scale farming has certain disadvantages, such as lower profits due to a lack of commercial motivation, and crop rotation is complex and heavily reliant on unexpected variables such as frequent weather and climate change. The challenges and possibilities of small-scale farming were the subject of this review study. It is primarily concerned with discussing different aspects of small-scale farming, such as the benefits, drawbacks, and features of small-scale farming, as well as potential difficulties connected with small-scale farming. The researchers working in the area of agriculture will find this review article to be a useful resource(2).

1.1 Evolution of Farming:

The development of agriculture began at least ten thousand years ago in southern and northern China, as well as in certain parts of America. Crop rotation, herbicides, irrigation, and fertilizers were all investigated a long time ago, but considerable progress has been achieved in the last century. People hunted animals using various homemade tools in the early stages, and after learning about fire, they began to roast animals in fire by hanging on top of it. Plants and animals for food were researched as human understanding progressed, followed by agricultural production knowledge. People have begun to investigate agricultural production techniques after gaining sufficient understanding about plants. Initially, the majority of people began farming on tiny plots of land. They began to manufacture their meals by using natural resources like as land, water, and light. Farmers use natural ways to produce their own seeds for their crops. Small-scale farming produces great food since it mostly uses bio fertilizers, which have a beneficial effect on crops(3).

In terms of environmental health and human health, small-scale farming plays a critical role. As the world's population grows, so does the need for food. In this respect, an improved agricultural system is required to meet the increasing society's food needs. Commercial farming enters the scene to meet this need. In order to produce food on a big scale, commercial farming is done on comparatively larger area. In general, the commercial agricultural system is profit-driven. Instead of using bio-fertilizers, the commercial farming system relies on chemical pesticides and plant growth regulators to produce food. The primary disadvantage of commercial farming is the poor quality of food produced as a result of chemical fertilizers. Another disadvantage is the production of carbon dioxide as a result of the usage of equipment.

People are becoming more aware of health problems, and they are beginning to prioritize health. Food is the most important source of nutrition and aids in the improvement of one's health. In this respect, most individuals began farming on their balconies and in their gardens in order to produce their own food using natural methods. Organic farming is a form of farming in which plants are grown in a natural manner. Organic farming is becoming more popular in nature, and many people are turning to it as a pastime and a career. The food is of high quality since no chemical fertilizers or synthetic plant growth regulators are used, but it is costly when compared to other farming systems. Crop rotation, biological pest control, green manure, and rock additions are some of the agricultural concepts of ecological balance used in organic farming. Organic farming avoids the use of synthetic products in order to preserve soil fertility(4).

1.2 Small Scale Farming And Its Characteristics:

Small-scale farming is often carried out by small farmers from rural regions who lack sufficient money. In general, most farmers in rural regions possess a small plot of land that they use for food production. They typically prepare meals for their immediate family and friends. The food that is produced is usually sold in the local markets. Manpower and manual tools are used more often in small-scale farming than machinery. There are a number of features connected with small-scale

farming, which are outlined below(5).

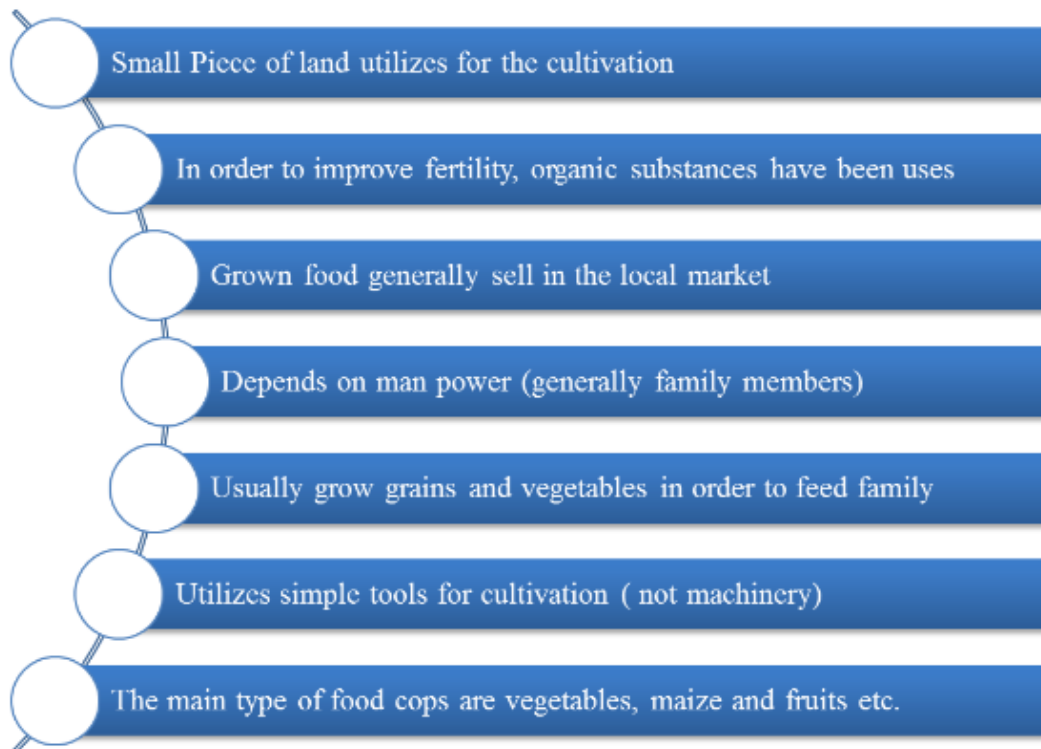


Figure 1: Representation of several characteristics of Small scale farming.

Figure 1 represents several characteristics of Small scale farming.

1.3 Merits Of Small Scale Farming:



Figure 2: Representation of several merits of small scale farming.

Figure 2 represents several merits of small scale farming which has been discussed below:

1.3.1 Better Management of Crop:

Tiny-scale farming is carried out on small plots of land. Farmers can easily manage their crops due to the limited amount of land they have. The cultivation is dependent on labour and small-scale farming. Due to a lack of equipment, all agricultural processes in small-scale farming rely on manpower. Workers' supervision and management are critical in this respect. Better supervision may be provided simply and successfully in small-scale farming to ensure that work is completed correctly and efficiently(6).

1.3.2 Provide Higher Employment:

Small-scale farming relies on a large number of people rather than big machinery and equipment. Small-scale farming is often done by rural farmers, who do not utilize equipment for crop production owing to a lack of money and resources. Small-scale farming offers large-scale employment in rural regions, allowing individuals who do not own property to make a livelihood. This is a significant benefit of small-scale farming. Because the majority of the people in India lives in rural regions, small-scale farming plays an important role in generating employment(7).

1.3.3 High Productivity:

Another advantage of small-scale farming is its increased productivity. The high yield is attributable to the efficient use of labor per acre in the cultivation process. The high cropping rate is the primary cause for the increased output in small-scale farming. In order to meet the family's demand for food, the domestic work standard rises in order to produce on a tiny plot of land farm. Higher productivity has been shown in many research linked to agriculture. Small-scale farming encourages the consumption of local, fresh foods, which is beneficial to one's health. After employment, high productivity is the second most important benefit of small-scale farming(8).

1.3.4 Better Control During Storms or Climate Change:

Weather and climate change are totally unexpected in nature. Due to the fact that farming is heavily influenced by weather and climate, small-scale farming plays an essential part in crop production. Small-scale farmers can make fast decisions in favor of crop output preservation in the event of frequent weather or climatic change. A good and timely choice may increase agricultural output, while a late decision might have a negative impact on crop productivity. Because of the tiny size of the property, the owner or farmer can keep a close eye on crop output, allowing for greater agricultural management during periods of extreme weather or climate change. Small-scale farming will be more successful than commercial farming in areas where the weather varies often, since commercial farming requires a large amount of land. Apart from the four main benefits listed above, small scale farming has a number of other advantages, including helping to build communities, improve community health (because it provides fresh food to the local market that can be consumed by people immediately after harvesting), and improve soil health and quality (small scale farming allows for better soil maintenance) (small scale farmers produce different types of crops rather than single crop as produced by commercial farming system)(9).

1.4 Demerits Of Small Scale Farming:

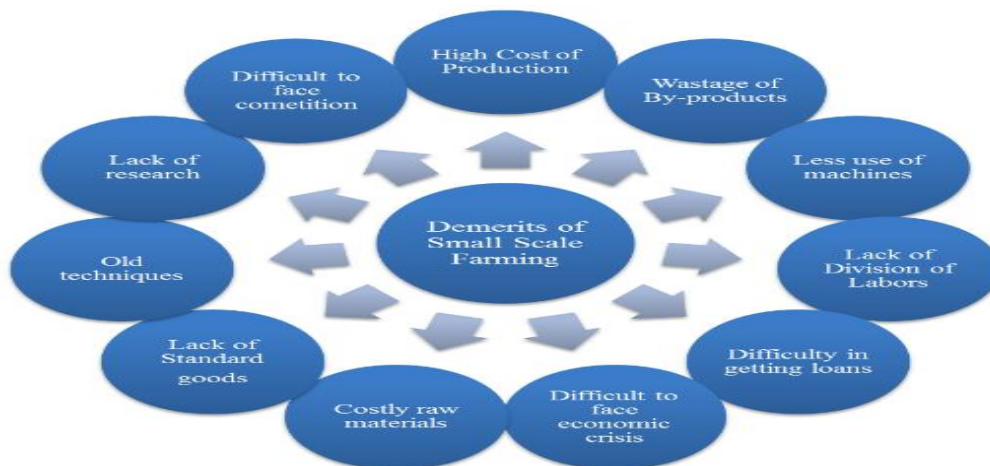


Figure 3: Representation of several demerits of small scale farming.

Figure 3 represents several demerits of small scale farming which has been discussed below:

- 1.4.1 *Less use of machine:* Because of small piece of land for farming in small scale farming, it is difficult to utilize machinery power for the cultivation.
- 1.4.2 *Difficult to face economic crisis:* Small scale farming usually done by rural farmers and generally these farmers don't have enough capital to face economic crisis.
- 1.4.3 *Wastage of by-products:* By-products generated by small scale farming don't have economic used that is why most of the by-products go waste.
- 1.4.4 *High cost of production:* The production cost is higher in small scale farming because it is mostly relies on the local labors and the labor cost is high.
- 1.4.5 *Lack of division of labors:* In small scale farming, the production is less and there is lack of division of labors and less benefits to the owner.
- 1.4.6 *Lack of research:* Due to lack of financial assistance, it is very difficult to invest capital in research and development for industrial growth.
- 1.4.7 *Difficult to face competition:* Small scale farmers face difficulty to compete with large scale farmers because they have enough capital and wealth to utilize enough resources for cultivation.
- 1.4.8 *Old techniques:* In general, small scale farmer's uses old techniques for cultivation rather than upgraded and advanced techniques due to which crop yield affected.
- 1.4.9 *Difficulty in getting loans:* Various loans policies have been launched by the governments and banks but they face difficulty in getting loans because of higher interest rates.
- 1.4.10 *.Costly raw material:* Small scale farmers, purchase raw materials in small quantity from local markets at higher prices.
- 1.4.11 *Lack of Standardized goods:* Goods produced by the small scale farmers are not standardized due to which it effects the selling of goods produced by small scale farmers.

1.5 Challenges Associated With Small Scale Farming:

- *Lack of Financial Support:* Small-scale farmers confront many challenges during economic downturns due to a lack of financial assistance. They can't afford adequate comfort since they spend the majority of their money on farming in order to feed their families.
- *Lack of Education and Research:* Because small-scale farmers lack the financial resources to invest in education and research, they are unable to improve their farming methods, which has an impact on crop production.
- *Health Risk:* Manpower, rather than machinery, is used in small-scale farming. Laborers often utilize basic instruments for cultivation, which may result in damage.
- *High reliance on natural factors:* Small-scale farmers are harmed by frequent weather and climate change. Small-scale farmers' crops may be totally destroyed by severe weather conditions, negatively impacting their financial situation.
- *Certification:* The products produced by small-scale farmers have certification issues, which have an impact on their saleability.

1.6 Factors That Promote Better Future Of Small Scale Farming:

Small-scale farmers' products offer a lot of advantages, which makes this farming method more popular. Aside from the many benefits, the small-scale agricultural system has certain difficulties.

It is critical to overcome difficulties in order to ensure a better future for small-scale farming systems. There are certain issues that need to be solved in order for small-scale farming to have a brighter future(10).

- *Financial Assistance:* Small-scale farmers may benefit from improved financial support in a variety of ways. During economic downturns, they may continue to invest in farming, which will help feed their families while also allowing them to make money by selling part of their goods on the market. Another benefit of financial support is that it may aid in the improvement of their farming methods, resulting in increased crop production.
- *Better Transportation Connectivity:* In general, small-scale farmers sell their products or commodities in local markets, which yield lower profits. Better transportation connection will enable them to move their products and sell them in distant markets for a higher profit.
- *Education and Research:* Education and research are essential for every field's development. Small-scale farmers often cultivate their land using traditional methods. Investing in education and research to enhance agricultural yield or output may be very beneficial.
- *Certification and Promotion:* Small-scale farmers' commodities are now plagued by the issue of standardized items. The absence of standardized goods has a negative impact on sales. Certification and promotion are required in order to market products produced by small-scale farmers. The involvement of government policy may be critical in this situation. Small-scale farmers' goods will sell more effectively if they are properly certified and promoted.

2. DISCUSSION

The majority of the world's population still lives in rural regions and relies on agriculture. Tiny-scale farmers with small plots of land who cultivate their crops on their small plots of land (generally referred as small scale farming). The main goal of small-scale farming is to feed their families. Because small-scale farmers employ biological ingredients for growing, the food they produce is of high quality. Instead of using equipment, family members and few local employees have been doing various tasks of agriculture in small scale agricultural systems. Small-scale farming employs a significant number of people, which boosts employment in rural regions. Small-scale farmers often sell their produce in a local market, which helps to ensure that people have access to fresh food. Small-scale farming has a number of advantages, but it also has a number of drawbacks. Tiny-scale farming is often carried out by small rural farmers. These farmers lack the financial resources to invest in education and research, and they confront many challenges in surviving during economic downturns. Climate and weather change are another significant issue. There is a risk that crops may be damaged during severe weather. Small-scale farming must be made more successful and productive by addressing a number of issues, including financial support, certification and promotion, education and research, and improved transportation connections.

3. CONCLUSION

Small-scale farming is a well-known agricultural method due to the high quality of the food it produces. Small-scale farming is carried out on a small farm with a large number of people doing various agricultural chores using basic equipment. The primary benefits of small-scale farming include high output, high employment, better crop control in the face of frequent weather and climatic change, and better crop management. Small-scale farming is unable to progress due to a number of obstacles, including financial constraints, high production costs, difficulties obtaining financing, expensive raw materials, and a lack of research and development, among others. Proper policies may aid in the promotion of small-scale farming in order to overcome such obstacles. Increase agricultural yields through giving financial aid, improving transportation connections, and investing in research and development. It is suggested that small-scale farmers be educated

about progress. The education may include subjects such as water management, soil nutrient management, and plant protection, among others. Another suggestion is to give small-scale farmers more electricity so that they may become self-sufficient.

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