

Hydroponic Agriculture as Business in Digital Era

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Article Info

Article history:

Received December 7, 2022

Revised December 9, 2022

Accepted December 11, 2022

Keywords:

Digital Marketing
Hydroponic
Marketing Mix
UMKM

ABSTRACT

Hydroponic is a farming activity without land and does not require large areas of land, this farming activity can also have potential as a business activity. This agriculture business activity can also help and even overcome problems that will arise from economic uncertainty. Apart from the hydroponic agriculture business activities, the quality of the final product will greatly affect the price which will ultimately affect the total income and profits from the harvest in that period. The hydroponic training in Laladon Village, Ciomas District, Bogor City is expected to increase community income by establishing SMEs and can also improve food security for the community. Business activities require good marketing strategy skills, today marketing activities are carried out through digital channels. The ability of a good marketing strategy will reach a wider market so that the potential of these business activities can generate better profits. A good marketing strategy will consider the level of effectiveness and efficiency of all available channels, by choosing digital channels that are effective and efficient and have an impact on the right marketing strategy and produce better market growth. To increase hydroponic sales, you can implement and develop digital strategies, namely by using whatsapp business, Instagram, TikTok, Facebook and Google Ads.

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INTRODUCTION

1. Background Problem

Obligations to each tertiary institution as explained in the Tri Dharma of Higher Education are Education and Teaching, Research and Development, and Community Service. In order to carry out one of the Tri Dharma of Higher Education, the Digital Business Study Program, Faculty of Economics and Business, University of Ibn Khaldun Bogor will carry out a Community Service program, this is carried out in relation to the concern of every higher education institution or institution for the surrounding community. To deal with the development and progress of the era with the rapid evolution of information and technology, higher education is expected to become a bridge between the general public and the increasingly sophisticated changing times.

FEB UIKA, through the Institute for Research and Community Service, University of Ibn Khaldun Bogor, responds to changes and developments in these times to care for people who have micro and small businesses so they are not left behind by the times. Along with the uncertainties from current economic conditions such as inflation growth and high central bank interest rates, in recent years, micro and small entrepreneurs have been required to be able to adapt to these uncertainties.

Community Service Activities are carried out in the village of Laladon, Ciomas District, Bogor City. In collaboration with the Bogor City Food Security Service, a hydroponic farming training was conducted which aims not only to improve food security but is also expected to increase the standard of living of the Laladon village community. This training is expected to develop village communities and give birth to new UKM actors.

Hydroponic farming activities without land and does not require large areas of land, farming activities This can also potentially be a business activity. Business activity agriculture it can also help even overcome problems that will arise from economic uncertainty. Apart from business activities agriculture hydroponic, the quality of the final product will greatly affect the price which will ultimately affect the total income and profits from the harvest in that period.

Business activities also require good marketing strategy skills, today marketing activities are carried out through digital channels. The ability of a good marketing strategy will reach a wider market so that the potential of these business activities can generate better profits. A good marketing strategy will consider the level of effectiveness and efficiency of all available channels, by choosing digital channels that are effective and efficient and have an impact on the right marketing strategy and produce better market growth.

2. Problem Formulation

From the background above, the formulation of the problem in this community service activity is:

- a. How to make hydroponics a business to increase income?
- b. How to design and choose a suitable marketing strategy?
- c. How to implement and develop a marketing strategy in the digital realm.

3. Purpose and Benefits of Community Service

The purpose of this learning activity through training is as a means of education for micro and small entrepreneurs to understand more deeply, be more skilled and proficient about:

- a. To find out how to make hydroponics a business in increasing income.
- b. To know how to design and choose a suitable marketing strategy
- c. To know how to implement and develop marketing strategies in the digital realm

4. Literature/Theory Review

4.1 Hydroponic

hydroponics, or also known as aquaculture, nutrient culture, soilless culture, or farming tanks, is gardening or farming using water that has been added nutrients, with or without a medium such as soil, gravel or perlite. System hydroponic has a number of advantages over gardening with soil. Hydroponic can be done indoors, this method is normally not suitable for growing plants, this method is also suitable for use in dense populations and limited land area. Weather is not a factor, and this system uses less water than this method the conventional. They will also compete less for nutrients than those growing in the soil, and have fewer pests, so they can be placed closer together.

4.2 Marketing Strategy

According to Philip Kotler, marketing strategy is a way in which the marketing function organizes its activities in order to achieve profitable growth in sales activities at the highest level. marketing mix. The elements of the marketing mix are:

1. Products

Product is the heart of the marketing mix. All marketing activities begin with the product. Products are not just physical entities; it captures all tangible and intangible aspects such as service, personality, organization, and ideas.

Without a product, we have no price, promotion or place. Hence, of all the 4 P's, the Product is the most elemental P.

Here, it is important to understand the relationship between product and marketing mix. Product mix is the entire range of products that a company offers to its customers.

The decision regarding the product mix will depend on many factors such as: Design, Features, Brand name, Product variety, Quality, Service, Packaging, returns, etc.

2. Place

Physical place or distribution relates to the transfer of product ownership from the producer to the customer

3. Price

Price is the monetary value that must be paid by customers to obtain or have a company's product. It is an important revenue generating component for the company.

Decision pricing must be taken with extreme caution, as it is a double-edged sword. If your product is priced too high, it may give the impression of high quality. At the same time, it will get your product placed in limited stores and. So marketers must know the art of using proper pricing

Price mix decisions need to consider the following marketing variables: Pricing method; policy; strategy, Benefit, Discount, rebate, Payment period, Credit policy

4. Promotions

One of the 4Ps of marketing strategy aims to serve two purposes. First, tell potential customers about your product and second, persuade them to buy your product.

the promotion strategy will thus cover the various ways that you can use to communicate with the target audience. An effective promotion mix will ensure good sales and marketers must strive to create a conducive environment.

The main elements of the promotion mix are: Advertising, personal selling, Public Relations, Marketing direct, Publicity -social media, print, etc.

4.3 Digital Marketing

we have entered the digital era, in which we can carry out all activities in a very simple way The general definition of the digital era is an era or era that has experienced conditions of progress in the realm of life in an all-digital direction.

The development of the digital era continues to run fast and cannot be stopped by humans. Why? Because actually we ourselves are demanding and asking things to be more efficient and more practical. Of course this will also be accompanied by negative and positive impacts. The digital era is a condition of the times or life in which all activities that support life can be facilitated by the presence of all-sophisticated technology.

Apart from that, the digital era is also here to replace some past technologies so that they can be more modern and also more practical. In order to deal with it properly, business people must prepare everything carefully.

Digital is a depiction of a state of numbers consisting of the numbers 0 and 1 or off and on (binary number). Digital comes from the word Digitus, which in Greek means fingers. If we count the fingers of an adult, then there are ten (10). The tenth value consists of 2 radix, namely 1 and

0. All computer systems use a digital system as their database. Also known as bits (binary digits). Sophisticated equipment, such as a computer, the processor has a series of calculations complicated binary. In a simple way, a binary process is like a light switch, which has two states, namely off (0) and on (1). For example, if there are 20 lights and a switch, if that switch is turned on in position A, for example, it will form a flower image, and if it is turned in position B, it will form a heart image. That's about the digital binary.

Digital marketing is not as easy as adding the word digital to the definition of marketing.

Indeed, if simplified, but many people can argue, the meaning of digital marketing is marketing using digital technology. However, it is becoming the norm that digital marketing is only used to describe marketing on the Internet, or ignoring that digital technology is used in almost every aspect of non- Internet marketing. So actually the meaning of digital marketing is basically marketing, or at least it's an element of marketing. In marketing terms, digital options are part of the marketing mix.

According to Chaffey and Chadwick (2016) digital marketing is a marketing activity that uses digital media and the internet that utilizes media in the form of web, social media, e-mail, databases, mobile/wireless, digital tv and various other digital devices to increase target consumers and to know the profile, behavior, product value, and loyalty of customers or target consumers to achieve marketing objectives.

The definition of digital marketing according to Coviello, Milley, and Marcolin (2001) is use

Internet and other interactive technologies to create and connect identified companies and consumers. Meanwhile Digital marketing according to Heidrick & Struggless (2009) is the development of digital marketing via the web, mobile phones and gaming devices, offering new access to advertising that is not heralded and very influential.

METHOD

The implementation method used is qualitative. Data was collected through interviews obtained from survey activities on the selection of MSMEs in Laladon Village, Ciomas District, Bogor Regency. Socialization, practice and discussion with several residents of Laladon Village who were selected as targets

for conducting MSME training. The activity was held on October 29 2022 at the residence of the Laladon Village Secretary. Attended by the community and selected community leaders from Laladon village.

RESULTS

The current state of inflation in Indonesia is causing people to be affected. One of the impacts felt is the increase in the prices of food needs. Meanwhile, people's income has not increased relatively. People are forced to find ways to improve their standard of living and improve food security.

One way to increase food security is to provide training in growing vegetables using hydroponics. Hydroponics, or also known as aquaculture, nutrient culture, soilless culture, or farming tanks, is gardening or farming using water that has been added nutrients, with or without a medium such as soil, gravel or perlite. System hydroponic has a number of advantages over gardening with soil.

Hydroponic can be done indoors, this method normally cannot be done to develop plants, this method is also suitable for use in dense populations and limited land area. Weather is not a factor, and this system uses less water than conventional methods. They will also compete less for nutrients than those growing in the soil, and have fewer pests, so they can be placed closer together.

This activity taught how to sow hydroponic vegetable seeds, dissolve AB Mix nutrients for plant nutrition so they can grow well, how to care for plants, how to harvest properly and correctly, and how to start and manage a hydroponic business according to market needs.



Photo of PKM activities in Laladon village, Ciomas Bogor.

With this training it is hoped that it can improve the food security of rural communities and foster the entrepreneurial spirit of the community. Not only can the community enjoy the crops from hydroponic vegetables, but the results can also be sold and provide additional income for the community. This training will also give birth to MSME actors who will ultimately improve the standard of living of village communities.

Hydroponic SME business actors are also taught how to legalize their businesses such as NIB (Business Identification Number). NIB is proof of registration/registration of Business Actors to carry out business activities and as an identity for Business Actors in carrying out their business activities (Article 12 of the 2020 WORK COPY ACT).

Government Regulation no. 24 of 2018 concerning Electronically Integrated Business Licensing Services (PP 24/2018) which forms the basis for obtaining permits through Online Single Submission (OSS). Minister of Cooperatives Number 2 of 2019 concerning Electronically Integrated Business Licensing for Micro and Small Enterprises, where NIB is issued by OSS (Online Single Submission) <https://oss.go.id/>.



The following are the steps for obtaining permits for small and micro enterprises (SMEs)

1. Make sure you have access rights
2. Visit <https://oss.go.id/>
3. Select Enter
4. Enter the Username and Password along with the Captcha listed then click the button ENTER
5. Click Menu Business Licensing and choose New Application
6. Complete Business Actor Data
7. Complete Business Sector Data
8. Complete Detailed Data of Business Sector
9. Complete Product / Service Data of Business Sector
10. Check List of Products/Services
11. Check Business Data
12. Check List of Business Activities
13. Check and complete Environmental Approval Documents (KBL/Specific Business Fields)
14. Understand and tick Independent Statement
15. Check the draft business license
16. Licensing trying to issue

How to register SMEs online into OSS:


1 Pastikan Anda telah memiliki **hak akses**

Hak akses berupa **username** dan **password** yang dikirimkan ke **e-mail** yang dicantumkan pada saat pendaftaran



Undang-Undang Cipta Kerja
Pasti, Mudah, Cepat

2 Kunjungi <https://oss.go.id/>



Undang-Undang Cipta Kerja
Pasti, Mudah, Cepat

After having an NIB, business actors can apply for Micro and Small Business Permits and Commercial or Operational Permits in accordance with their respective business fields. This NIB consists of 13 digit numbers which also record electronic signatures and are equipped with security.

Marketing Mixed

To continue the business, a strategy is needed so that marketing can be maximized. Here's the Strategy Suggested marketing is carried out by MSME actors. namely: Product, Price, Promotion, Place.

1. Products :

In determining the marketing strategy for this product, things to consider include function, appearance, quality, and packaging of the product.

In selecting a product, customers will consider the advantages and benefits of the product. In fact, it is not uncommon for customers to first search the internet for the product they are going to buy.

For this reason, we should be able to consider the main features, benefits, and customer desires for the products we will offer. So that the marketing strategy that we will run can be successful in the future.

This Hydroponic product is an agricultural product that is in demand by consumers who are interested in a healthy lifestyle. Because the planting process is easy, does not require large areas of land and is easy to care for, this product has its own market share.

However, it is hoped that these farmers/SMEs can package their products properly so that they are worth selling and have a high selling value.

2. Price :

This price element relates to the strategy we use in setting prices for the products and services we will offer, as well as how the prices we have offered can affect customers.

In deciding the price that we will offer, we can refer to several things. Such as product selling prices on the market, discounts, payment methods, credit, and other services. So that our business does not lose money, but the price is still acceptable to buyers.

Likewise for this hydroponic harvest, a selling price will be determined in accordance with market capabilities, after calculating the capital that has been issued.

3. Promotions:

Marketing strategy is closely related to promotion. This promotion is all activities carried out so that our business can be known by many people. This promotion can be in the form of advertising, adding relationships, and sponsorship.

In promotion, a marketing strategy is important. Given the production costs are not low. So it is very important to determine whether the promotion we are doing is feasible or not in increasing product sales.

To introduce this hydroponic product, several appropriate approaches are needed. Like selling online or selling directly.

4. Place :

Place refers to the location where our business products or services are seen, made, sold and distributed. In considering this place, there are a few things to watch out for. Two of them are affordable, and don't cost too much.

It is very important to consider the affordability or ease of access of these products to customers, so that customers can easily find products.

Good distribution channels can increase hydroponic sales. Meanwhile, SMEs in Laladon village have collaborated with a market place, namely Sayur Box, so that their hydroponic products can be sold directly to the public and connoisseurs of healthy vegetables.

Digital Marketing.

Sales play a very important role in a business. If the sales are good, the profit generated will be maximized and in the end the business will grow rapidly.

The current development conditions, where the digital world is developing very rapidly. Likewise in the world of marketing. Sales are not only done conventionally, but are now developing in the digital world. This is a challenge for SMEs, because SMEs must master technology. This marketing is known by the name Digital Marketing.

Digital marketing is a type of marketing that promotes, sells products and services by utilizing digital media such as social media, Google, and email. By using digital marketing SMEs can reach a wider market. This is because many people have connected to the internet. Second, the costs required are not as big as marketing such as advertisements on television/magazines. Third, they can create marketing materials in various forms (videos, images, writing) and have many easily accessible media options.

Digital Marketing includes:

1. Content Marketing
2. Google My Business
3. Websites and Landing Pages
4. Social Media :
 - a. WhatsApp Business
 - b. Facebook
 - c. Instagram
 - d. TikTok
 - e. YouTube

5. Paid Ads:
 - a. Google Ads
 - b. Facebook Ads
 - c. Instagram Ads
 - d. TikTok Ads

For hydroponic players, they have been encouraged to make sales online, either using WhatsApp business, Instagram, Facebook, Tiktok or YouTube. It is hoped that by using good digital marketing, increased sales can be increased.

CONCLUSION

The conclusions from the training activities in this community are:

1. Hydroponics is a way of doing gardening or farming using water that has added nutrients, with or without a medium such as soil, gravel or perlite. System hydroponic has a number of advantages over gardening with soil. This is a promising business and if it is managed properly it will be able to increase income for the village community, by establishing MSMEs.
2. To choose a marketing strategy that is suitable for this hydroponic business, by doing marketing mix or appropriate marketing mix. The resulting product, namely healthy vegetables, has an existing market share. The price set is also not too expensive or in accordance with the target market. Promotion is done by word of mouth or online promotion. The selected distribution channel is cooperating with the marketplace vegetable box which already has a clear market share.
3. To increase sales by implementing and developing digital strategies, namely by using whatsapp business, Instagram, TikTok, Facebook and Google Adds.

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