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# **The use of data from local weather stations as a marketing tool for plant protection products**

CASE COMPANY SYNGENTA

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Abstract  This thesis was conducted to study how data obtained from local weather stations can be used as a marketing tool for Syngenta, a company that produces plant protection products. I have used market research and consultation from the company to gain an understanding of the current market situation in Finland and the business development potential in it.  The main focus of this theses is on the improvement of customer experience, in order to keep and gain customers. Sustainability of the innovation and stakeholder relations are studied to identify the improvement potential of company's general image. In the implementation portion of this thesis, I have created the outlines of an application, as well as a social media marketing plan. At the time of writing my thesis the development of the application and its marketing are in early stages.  Improving the use of local weather stations and making the data obtained from them easily accessible for farmers, answers a direct need in the market, for more specific and reliable instructions for the use of plant protection products. And so in this thesis I have gathered the varying ways it can be taken advantage of in marketing.		
<u><a href="#">Key words</a></u> Marketing, Agriculture, Sustainability, Customer experience		

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## REFERENCES

## 1 INTRODUCTION

New innovations and technologies are necessary to achieve efficient and sustainable production in agriculture in the vastly populated world.

This thesis focuses on the idea of using information obtained from local weather stations in production of good quality grain. While the basic technology of weather stations has been in use for a long time, they have not been utilized to their full potential as a tool for farmers.

Case company for this thesis is Syngenta, a company that develops and produces plant protection products, breeds crop varieties and develops services for agriculture. It's a global company with 26000 employees in over 100 countries. "Syngenta is a leading science-based agtech company. Helping millions of farmers around the world to grow safe and nutritious food, while taking care of the planet." (Syngenta.com)

The goal of this thesis is to combine market research, the corporate principles of Syngenta and my own ideation to show how the company can best take advantage of this innovation as a product support and a marketing tool. The main angles the topic is studied from are customer and stakeholder satisfaction, the environment and marketing. The geographical focus is on Finland.

The thesis starts with a more in-depth description of the company, innovation and objectives. The second chapter consists of market research, to give a general idea of the market and the influences in it. The marketing potential portion of the thesis showcases different marketing opportunities in the field. The fifth chapter of the thesis is about the implementation of the marketing ideas, based on market research and marketing potential covered in previous chapters. The thesis ends with the conclusion of ideas and discoveries, as well as a quick look into the future of the industry and Syngenta.

## 2 PURPOSE, OBJECTIVES AND THE CONCEPTUAL FRAMEWORK

### 2.1 Case Company

Syngenta's core business is to develop and produce products and solutions to protect crops and to develop seeds. They support farmers with technology, knowledge and services, so that they can sustainably provide the world with better food, feed, fibre and fuel. (Syngenta, 2021)

In Finland Syngenta has three employees, two of which work with crop protection. Syngenta Finland is part of Syngenta Nordics, based in Copenhagen. Commercial business is run from Copenhagen, and the personnel in Finland work with marketing, development, trialing and stakeholder contacts.

Besides customers - Farmers and retailers, Syngenta's main stakeholders are farmer interest groups, food and feed industry, grain trade, advisors, political decision makers and customer interest groups. The main retailers for Syngenta Finland are Hankkija, Lantmännen Agro and Viljelijän Berner.

Syngenta's goal is to create value for their customers and stakeholders as well as increase awareness of proper food production techniques among them. In order to make farming more efficient and sustainable, they focus on improving crop productivity. Syngenta has an initiative Good Growth Plan that aims to fight against the climate change and biodiversity loss, as well as to decrease carbon footprint in agricultural production. (Syngenta, 2021)



Picture 1. Syngenta company logo

## 2.2 Weather stations and the innovation

Local weather stations support the use of already existing information about right products, doses and timing of plant protection products. The stations measure weather conditions, including temperatures and humidity of soil. When combined with weather forecast it helps farmers to make the right choices for successful plant growth regulation (PGR). Proper plant growth regulation is necessary to ensure the best use of land area and resources, making farming as economically efficient as possible and environmentally sustainable.

Hankkija markets local weather stations produced by the brand FieldSense, which were launched in Finland in 2021. Currently there are 150 stations in use in Finland, and the goal is to significantly increase their use within the next couple of years. Syngenta's innovation is to use the information gained from the stations to create more in depth use recommendations for their plant growth regulators. Syngenta is developing the concept of using data from FieldSense stations for PGR use in cooperation with Hankkija. Especially information of soil temperature and humidity is very useful in this respect. (Syngenta, 2021)

This innovation gives the opportunity to increase customer loyalty and to get new customers.

## 2.3 Purpose and Objectives

The objective of this thesis is to study the marketing and product value adding potential of this already existing technology. Weather stations have been in use in agriculture for a couple of years and it can be concluded that they make an asset in farming, it is more so a matter of how to take full advantage of them.

This thesis focuses on how the innovation and the future application can be used as a product support for Syngenta's two main products sold in Finland, as well as a marketing tool to keep and gain customers. The marketing ideas covered in this thesis are directed to multiple targets: farmers, retailers and stakeholders, in order to study how this technology could improve Syngenta's general image in Finland.

The implementation portion of the thesis presents a plan for an app, that could be used as a tool to better the customer experience and relations between farmers, retailers and Syngenta. As well as a simplified social media marketing plan, to describe the possible methods of promotion in the near future. The objective of this thesis is well in line with the company values, both focusing on the customer and stakeholder satisfaction, the environmental benefits and Syngenta's ambition for new innovations to develop agriculture.

This project is not in motion and the plan for an application only an idea. This thesis aims to present the marketing potential and an initial marketing plan for it.



## 2.4 Conceptual framework



Figure 1. The Conceptual Framework: The use of data from local weather stations as a product support in marketing concept of plant protection products (Riina Markkula, 2021)

This simplified conceptual framework shows the three main segments I have divided my thesis into. The market research includes description of the market: customers, stakeholders and competition, as well as the general situation of the Company. In the marketing potential portion I study the topic from the view points of the customers, stakeholders and the company itself, as well as sustainability and societal issues. The final big portion of the thesis is description of the potential implementation of marketing. In this portion I go through the most efficient, and likely to be used, marketing channels and a general plan for an app and its benefits. The end concludes the discoveries of the thesis and some estimations of the future activities of the company.

### 3 DESCRIPTION OF THE PROJECT

#### 3.1 Why was the project implemented

The aim of this thesis is to study the agriculture environment and its current and future technological advances, with the focus on local weather stations as a tool for farmers. There is marketing potential in this, and this thesis was made to present the different marketing aspects that could be beneficial for Syngenta and their operations in Finland. With Syngenta's connections with their customers and stakeholders and the feedback gathered from them, as well as their expertise in the field, they are able to build a general image of the future demands in the market. Improving the use of local weather stations and making the data obtained from them easily accessible for farmers, answers a direct need in the market, for more specific and reliable instructions for the use of plant protection products.

#### 3.2 How was the project implemented

The research for this thesis was done using current internet sources, literature related to the topic and consultation from the company. I interviewed one of the company's marketing managers to get an understanding of the field and Syngenta's position in it, as well as to stay on track of the current developments regarding local weather station use. The main tasks during the thesis process were to lay out an image of the market, note the marketing potential in it, and draw out a marketing plan based on them, as well as knowledge gained from school. This thesis was written over the winter of 2021-2022, with the content evolving during process, according to new ideas and developments.

## 4 MARKET RESEARCH

Market research aims to gather information about the company's target market, its situation and the influences in it. Market research should include information about the customers and competitors, as well as the challenges and possibilities in the market. Through market research companies can learn how to add more value to their products and services, by studying the needs of the customers and trends of the market. Market research can be conducted in various ways depending on the desired information. Public and internal sources can be used to gather data, to study the success of the company and its competitors. Measuring the success of different products or projects, whether through data or customer satisfaction, is a great way to gather valuable information. Customer feedback should be used to form an understanding of the customers needs and desires. (Farese, 2022)

The market research for Syngenta focuses on the different influences in the field, and their needs. Data is used to give a general image of the industry's size in Finland. Included is also a description the general goal of farmers and the role of PGR in it, as well as a description of the current situation and products: the problems and possible solutions.

### 4.1 Market Description

Finland is relatively small market area. The innovation focuses on cereal growers. Currently there are 14 657 farms producing cereals in Finland, of which 10 000 are potential users of PGR. In land area this is 1 million hectares. The average cost of PGR treatment per hectare is 11.5 euros, making the total market value over 11 million euros. Currently Syngenta holds around 45 percent of the market share. The tables below show the main numbers of crop protection product market in Finland in the years 2019, 2020 and 2021. The survey was made by Kynetec FarmTrak in Germany, with the order from Syngenta Nordics.

Table 1. Use and value of PGR's (Kynetec FarmTrak, 2021)

	2 019	2 020	2 021
Cultivated Area (1000ha)	1019,1	1035	1015,4
Treated hectares (1000ha)	431,210	290,065	216,327
Turnover m€	4,74	3,01	2,07
Cost €/ha	12,74	11,11	11,28
Tonnage (t)	164,22	102,18	77,14

Table 2. Market shares of PGR producers (Kynetec FarmTrak, 2021)

	2019	2020	2021
Syngenta	54 %	48 %	44 %
BASF	31 %	35 %	33 %
Nufarm	10 %	11 %	18 %
Bayer CropScience	4 %	3 %	3 %
Klarsø & Co. ApS	1 %	4 %	2 %
unknown	1 %	0 %	

#### 4.2 Influences in the market

Syngenta's marketing is targeted to multiple different targets. From the science to production, and all the way to the end customers, there are stakeholders that need to be satisfied with Syngenta's products and services. Identifying the different targets and understanding the wants and needs that they share, gives a basis for the marketing potential and strategy.

The main customer can be determined to be the farmers. Like all the other stakeholders, farmers want to gain value for their business, and for that they need good products as well as information, support and new ideas. Their purchasing decisions are affected by the other stakeholders, that include retailers, input suppliers, advisors,

other farmers, the law and society, as well as feedback from their customers in the food and feed industry.

Retailors selling Syngenta's products in Finland are Hankkija, Lantmännen Agro and Viljelijän Berner. So that these retailers want to continue and develop, selling and marketing Syngenta's products and services they need good products, information and training, as well as background and marketing support.

Agricultural press and advisors can advance marketing for companies, for this they need new ideas and material. In order for them to be able to inform and advise correctly, they need the right information and support. Finland has few bigger magazines regarding agriculture in Finland, as well as smaller magazines directed straight to the interest groups.

The law and society set certain norms for plant support products, and their production and use. Although their wants and needs are not easily defined, it is key to strive for sustainability and economical efficiency. In order for company to better their image in the eyes of political decision makers and people in general, they must inform and educate them and come up with new ideas.

Syngenta's biggest competitors in the Nordic countries are Bayer CropScience, BASF and Nufarm. Despite the competitor status, it is beneficial and often necessary for the companies to join forces. They cooperate in the industry association with the aim to manage and defend common interests, for example influence political decision makers and the public. Competitors can advance marketing, with joined recommendation and the mutual desire for sustainability in the industry. (Syngenta Finland, 2021)

### 3.3 Current Market Situation

Cereal growers' aim is to produce high grain yields of good quality, in the most economically efficient and environmentally sustainable way. One of the big risks they face are the weather conditions during summer period. Unfavorable weather can cause crop to grow unevenly or lodging, which is when crop becomes flattened. Plant growth regulators (crop protection products) are used to avoid these risks. With these products growers can manage the crop development. The challenge for the growers is to figure out the most suitable use for their personal needs. Timing of the use, finding right product version and calculating the right dosage, present challenges for the growers. (Syngenta Finland, 2021)

The plant protection products sold by Syngenta in Finland are Moddus Evo, which effects are quick and short lasting and Moddus M, which effects are medium lasting. Moddus M is also sold under a different brand, Sonis, by Berner and Landmännen Agro on the market. There are about five similar products produced by competitors in the Finnish market. Syngenta has a third product in development, which effects will be longer lasting. (Syngenta Finland, 2021)

Syngenta is in great liaison with its retailers, in order to keep track of and develop the market. Knowing the customers wants and needs enables the companies to better their services. Farmers reportedly feel uncertain about the product version, dosage and the timing of different activities. This is evident by the questions asked in Syngenta's telephone service and feedback given by customers. Minimizing the challenges customers face with the use of Syngentas products, will improve customer experience and increase their loyalty towards the company.

## 5 MARKETING POTENTIAL AND SOCIAL MEDIA MARKETING

### 5.1 Customer Satisfaction and Loyalty

In order for a company to gain and keep customers they must increase customer loyalty. Customer loyalty is strongly tied to their perceived value of the product and service. It is not enough to meet the customer's needs and expectations, but to exceed them. In this way company can add additional value to their product. Creating a particularly good customer experience for each customer adds to their perceived value of the product and service. Presenting free tools for the customers shows the company's support and care for them, which leads to better customer loyalty. (Karkkila, 2008)

Developing the use of local weather stations as tool for farmers is a business supporting activity to enhance the customer experience. To main customers, the farmers, uncertainty of the use of the products negatively affects their customer experience. Even though they are currently generally satisfied with the instructions and personal assistance, it is important to improve upon it to keep and increase customer loyalty. When the technology is implemented into an easily usable form, it will help the farmers and decrease uncertainty. It will also build the general image of both Syngenta and Hankkija amongst their customers and stakeholders. When customers are happy with their experiences they will function as marketers of the company's products forward.

### 5.2 Stakeholder marketing

For companies with complex value chains, like Syngenta, it is important to look at marketing from a stakeholder marketing perspective, in which the customers are not separate from the stakeholder network. Understanding the stakeholder value system

and how different stakeholder's interests affect each other, is key when creating a marketing strategy.

Stakeholder marketing aims to consider multiple stakeholder interests when designing, implementing and evaluating marketing strategy, understand the full impact of marketing on all stakeholders, study the relationships between stakeholders, understand how marketers can effectively address commonalities and conflicts in stakeholder needs and interests, as well as help maximize shareholder value. (García-Rosell, 2013, pp.21-23)

In stakeholder marketing perspective the value is co-created with multiple stakeholders and its effects more indirect. When stakeholders have bigger role in the value creation, they gain more influence over company's operations, such as marketing decisions, new innovations, branding, product specifications and advertising. (Hillebrand, Driessen & Koll, 2015)

When the different stakeholders interests, mentioned earlier in market research, are understood, the company can better plan their information release and marketing. In order for Syngenta to benefit from the local weather stations and the added technology, the common interests of the stakeholders that it serves, must be made known. The innovation is beneficial for the environment, it offers guidance and information and builds trust, all off which are desired by the stakeholders. Taking a more stakeholder focused marketing perspective should lead to stronger stakeholder relationships and reputation in the industry.

### 5.3 Sustainable Marketing

Agricultural soil holds an enormous potential to mitigate climate change by storing carbon. Corporate participation is needed to scale carbon sequestration and implement the change in the food supply chain, in order to achieve and promote more sustainable food production. (Carbon action, 2021)



Today sustainability is considered part of corporate social responsibility, and more and more customers base their purchasing decisions on the environmental impact of the product and the values of the company. Companies must give evidence of and advertise the sustainability of their operations, to gain customer loyalty.

Sustainability is already a big part of Syngenta's marketing, and they are constantly developing their science and technology to meet and exceed the demands of the industry. "When we talk about sustainable technology breakthroughs, we mean innovations that are designed to reduce agriculture's contribution to climate change, mitigate its effect on the food supply and provide farmers with the tools they need to manage their land sustainably." (Syngenta, 2021)

Using weather stations in farming supports sustainability. It makes land area use more efficient, which lowers carbon footprint. Consideration of rain and soil humidity prevents nutrients from leaking to watercourses. Basing farming decisions on weather station data and professional guidance, makes farming not only more sustainable, but also increases food security. Sustainability is a consumer and societal interest, and it must be made part of marketing, in order to gain competitive advantage.

Customer journey map helps to illustrate stages customers go through, and the factors within them that affect overall customer experience. Mapping out the goals, both for customers and company, helps to identify the points of development.

## 5.4 Customer Journey Map

Table 3. Customer journey map (Riina Markkula, 2021)

Stages	Awareness	Consideration	Purchase / Use	Loyalty / Advocacy
Actions and influences	Marketing Word of mouth Media	Comparing options Prices Website Company reputation	Customer service Instructions for use	Customer experience, satisfaction and feedback
Customer Goals		Finding the best option Have information easily available	Right and quality products Get guidance if needed	Give feedback Feel served and appreciated Repeat good customer experience
Business Goals	Increase awareness Give good impression	Increase the number of website visitors Inform customers	Make products that match expectations Develop customer service	For customers to become advocates Increase customer loyalty Study customer feedback

## 5.5 Social media marketing

Companies use different social media platforms to connect with their customers, market their products and build image for their company. Social media is a marketing tool with huge amount of potential, especially in business to customer marketing. The influence of social media has grown enormously in the past decade, and it is constantly evolving. Navigating the different platforms and staying on top of the trends can be

challenging for companies, and so it usually requires some form of planning or strategy. (Sedley, 2010)

When creating a strategy for social media marketing the company should know what their goals are, both monetary and company image building wise, as well as what are the best platforms to use to fit these goals. The basic actions for companies are creating their company accounts and then posting on them. The posts should be current and fitted for the specific platform. However there is much more to companies presence in social media. It is a way to engage with their customers and potential customers, they can reach out to them and answer their possible questions quickly. Social media can be used to assess customer interests and satisfaction, for this there are different analytical tools. Advertising on social media is also often a lot more than companies just posting about their products. Social media is full of paid advertising. Companies can pay to advertise on different platforms, as well as forms of influencer advertising. Paid social media advertising is an effective way to reach target audiences. (Salwankar, 2017)

During the development process of the innovation and the application for it, Syngenta aims to get feedback and ideas from the end-users. A great tool for this kind of collaboration is the social media. Companies use of social media aims to build relationships with their customers and stakeholders. For this project it is through getting feedback, showing end-users experiences, and updating on current development. Social media is way to give guidance and information that can be easily and comfortably received by customers and potential customers, building trust on the company. As social media is a great way to reach a lot of people, it is the ideal place to market new innovations, and this way drive more traffic to company website and the future app. In the implementation portion of this thesis a more specific plan for social media marketing is presented. It describes some potential, and likely to be used, ways to use social media in marketing the use of weather stations, and the future application.

### 5.5.1 Facebook

Facebook is one of the biggest, social media platform at the moment. It has more than 1.5 billion active users daily. It is a social media platform used by private people, organizations and businesses. For companies it is a great way to reach new customers and communicate with the already existing ones. Facebook can be used as a free marketing tool to market the company and its products, as well as to build their brand and image.

Facebook is a versatile social media platform. The content can consist of videos, images and texts, and can vary in style a lot. The content put out by companies, depending on the field, can often be educational and promotional. However posts on Facebook should not be too serious in nature, but to show a more humane side of the company and their activities, in order for the viewers to be able to relate to them. Instead of profiles, companies should set up Facebook pages. People can connect with the pages by liking them. Company's Facebook page should showcase the basics of the company through name, profile pictures and the description. Links to related company websites should be included in the description. (Conley, 2022)

Facebook can be used as an effective marketing tool. In addition to posting on their page and communicating with customers and partners, Facebook can be used for paid advertisement. Through paid advertisement companies can better reach target audiences, according to location, age or profession. Getting more people to like a company's page through advertising, ensures that the company's posts will show on their Facebook news feed. As the company website is advertised in the company's Facebook page, should the Facebook page be advertised in the company's website as well. (Marrs, 2022)

### 5.5.2 Instagram

Instagram is a massive social media platform. It is mainly designed to be used as a phone application. Instagram was officially launched in 2010, and it currently has over

1 billion active users daily. The audience on Instagram is generally younger than on Facebook. Content on Instagram consists of videos, images and Instagram stories. Using hashtags, relevant to the post and tagging other accounts, is a way to control the visibility of the post. Instagram is used by both private people and brands. (Leaver, Highfield & Abidin 2020, 8)

Instagram is a great platform for companies to gain awareness for their business. According to Instagram's own research, 90 percent of users follow some company, and 50 percent of users report that their interest of the company grows because of their Instagram advertisement. On Instagram companies can link their product websites and online stores on their posts, which is likely to increase website traffic. Instagram can also be used as a platform for paid advertisement. With paid advertisement companies can create specific adverts or transform their posts into adverts. Paid advertisement allows companies to better target their advertisement, as well as monitor the effectiveness of it, with the data of visitor and klick quantities. (Business.instagram.com)

### 5.5.3 Other social media

Using variety of different media platforms increases the visibility of the company and ensures that the company is known by different target groups. Different media platforms can be categorized by the type of content displayed on them. The content types can be for example, videos, pictures, blog texts, or customer service. It is important for companies to know what type of content is most beneficial for them, and then choose the best media platforms based on it. The biggest social media platforms in addition to Facebook and Instagram are: Twitter, Linked In and Youtube. (Sedley, 2010)

Twitter is a social network where people and companies can post tweets with a 280 character limit. The tweets can be liked and retweeted by others. The short and quick nature of Twitter makes it optimal for sharing news and promotions. Linked In is a social media platform mainly used for professional networking. It has over 750 million

members. Linked in is used by companies to recruit and in turn by people to find employment. With the focus on building connections, Linked In is a great platform to connect with people and businesses in the same industry.

Youtube is a video sharing platform with over 2.5 billion active users, and it is also the second most viewed website in the world after Google. In Youtube people and companies can create their own channels, to post content. Youtube is ideal for companies to post informative and sometimes more promotional content. Youtube can also be a place for companies to post more lighthearted content, to show their personality. Youtube is a search engine based platform. Optimizing content with key words, thumbnails and good descriptions, increases the chances of people seeing the videos. Channels analytics tab can be used to help with the optimization. (Martin, 2021)

## 6 IMPLEMENTATION

### 6.1 Application

The main method of implementing the innovation is creating an app and a website, that will give PGR guidance based on local weather station information and each user's personal needs. A similar website already exists, however it does not take weather information into account. The website has been a useful tool, so the plan is to expand on it and make it into an app-form. The goal when creating the app is for it to enhance customer experience and function as an information and product promotion channel. The user interface will mostly consist of farmers. The app will be free, and it should be made clear and easy to use. Well-functioning app will help farmers with their uncertainty of the right PGR actions and build their trust in the company.

Main functions of the app will be based on the already existing website, with the added information from the local weather station. The app will have the users sign in and add their own information: cereal type, land area, location. With modifications on the algorithm the app will be able to recommend the right product, dose and time based on the user's own info and the local weather station info about upcoming weather and soil humidity. Besides the main function, the app will work as an information channel, containing basic info on Syngenta and Hankkija, as well as links to their websites. Product and technology information will be easily available in the app and through links to websites, for more in-depth descriptions. The app will give notifications about current user specific matters, as well as possible changes in product use instructions.

The app will function as a promotion channel. Though it is free for everyone to use, it has the strong presence of Syngenta and Hankkija. The app recommends the two main products produced by Syngenta, used in Finland. The goal for future is to recommend new products as they come. It is more likely for a customer to purchase the exact product recommended by an app or a website, instead of a similar product by a different brand. With easily accessible information and contact possibilities, company gives evidence of faith in their own operations. In order for the app to become successful and popular tool for farmers, it must be marketed.

## 6.2 Marketing Channels

In order for the innovation to reach customers, companies need to plan how and where to market the app. Syngenta and Hankkija have multiple different marketing channels in their disposal. The focus in marketing should be on relationship building with customers and stakeholders. The plan in the beginning will be to market so people will start using the app, and continue with marketing how they are using it, to reach even more potential customers.

Syngenta and Hankkija have company websites that contain a lot of information about their products and technology. The websites are often used by customers and stakeholders to learn more about their activities. The app could be marketed on the websites in their news sections, as well as with banners in the main page.

Social media is a great tool for relationship and community building with customers and stakeholders, as well as a channel to reach new potential customers. Most of Syngenta's social media marketing happens on Facebook, Twitter, Youtube and Instagram. Social media marketing should be approachable and less formal to catch peoples attention and drive website traffic. Other media that could be used to market the app is the biggest agriculture magazine in Finland: "Maaseudun Tulevaisuus".

There are different industry exhibitions and events in Finland, that Syngenta and Hankkija take part in, or act in as the organizer. These offer great change to market new innovations and create personal contacts with customers. Informing customers face to face and demonstrating the apps functions, increases the likelihood that they will start using it.

Email marketing is a way of direct marketing, that allows companies to reach their customers in different customer lifecycles. It is used by many companies since it is cheap and easily modifiable. Email marketing should be personalized, segmented and triggered. Personalization of email marketing can be done by using each receiver's personal data, for example about location or buying history. Dividing customers and stakeholders into segments helps to plan email marketing. Figuring out each segments



desires and then modifying the messages to fit them is key. Triggered email marketing happens on certain time or occurrence, for example seasonal change, sale or customer action. Using triggered email marketing ensure that the message is relevant. The app and website introduction and link should be added to emails promoting products and sales. A simple email marketing plan specifically for the app could also be created and sent to the correct customer and stakeholder segments. Receiving good direct marketing helps to form connections and enhances customer experience. (Andrus, 2019)

### 6.3 Social media marketing plan

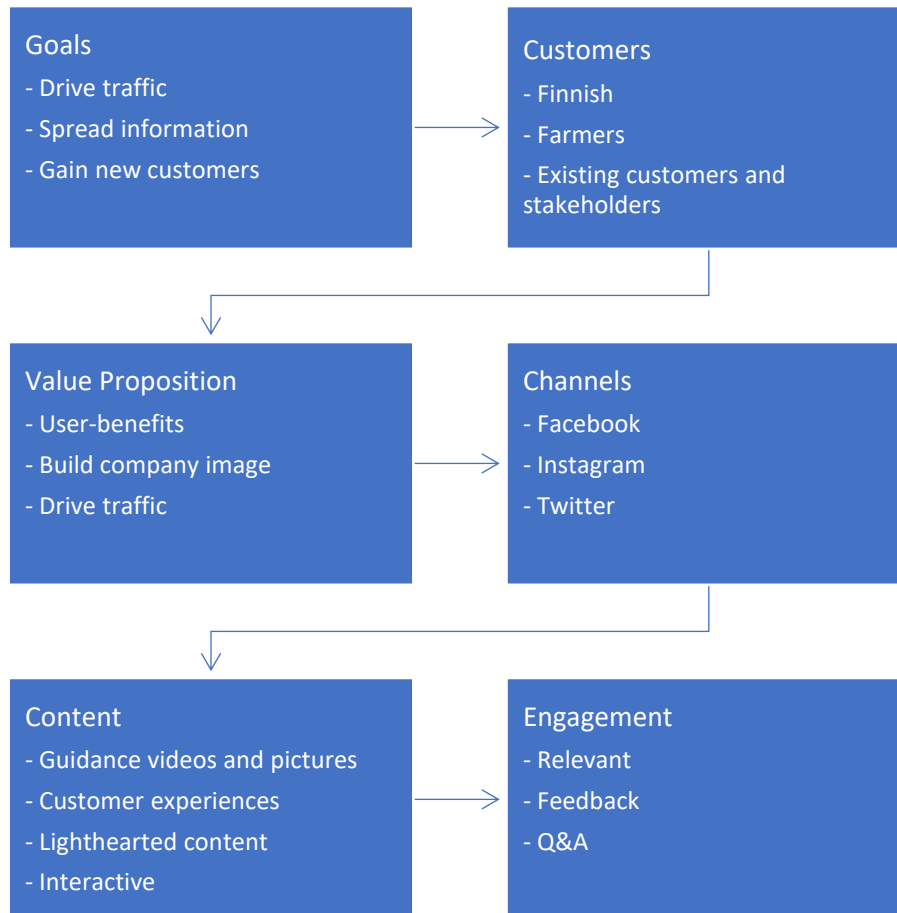


Figure 2. Steps in social media marketing plan (Riina Markkula, 2021)

The figure above showcases the six steps in social media marketing plan for Syngenta. Syngenta will use different social media platforms to market the use of local weather stations to help estimate the correct usage of plant protection products. Planning social media marketing should always start with defining the goals. The main goals for Syngenta are to drive traffic to their website, get people to log into the future application, share customer beneficial information, and ultimately gain new customers as well as build the general company image in Finland. Social media marketing will be aimed at the already existing customers and potential customers, mostly Finnish farmers, to build stronger connections and to market the innovation and company.

The main social media platforms in this marketing plan are Facebook, Instagram, Youtube and twitter. The content and frequency of posts varies slightly between the three platforms. The content, described more specifically in the following chapters, is

mostly pictures and videos. The focus, in marketing the innovation and the application relating to it, is customer experiences, how they are using it and the benefits it presents. The engagement on social media should be planned so there is always someone available to answer possible questions and giving feedback should be encouraged.

### 6.3.1 Content on platforms

Once the website is tested and application prepared to be launched some form of social media announcement should be done. The announcement should be informative and professional, but also draw attention. It should highlight the benefits of the innovation and be aesthetically pleasing but simple, including links to the current form of application. Similar announcement should be made in all social media platforms used by the company, as well as in the official company website.

The social media marketing schedule for the application, as well as the general marketing of the use of local weather stations and its benefits, is linked to the development and success of the application. For Syngenta seasons, especially in Finland, have an effect on posting and marketing on social media, as there is more to update and inform during the farming season. For Syngenta to improve their presence on social media, they should use the industry's active season to post current updates, and the off season to reflect on the past to study the successes and consider improvements.

### 6.3.2 Facebook

Facebook is used by Syngenta Finland to give updates on the company's operations and simplified user instructions. The tone of Syngenta Finland's Facebook is quite professional and informational. Once the application is in use, it should be marketed in Facebook through mentions in different posts. If the app is relevant to the post, it could be mentioned in the post itself (video), in the description or in the comments,

with the necessary links included. Content in Facebook for Syngenta should continue to be demonstrational and informative, but the posting frequency could be increased. Posts in Facebook should also encourage the viewers to write comments or questions, this can be done by addressing the audience more directly or asking them questions in return.

### 6.3.3 Instagram

As of now Syngenta Finland does not have their own Instagram account. If hypothetically they choose to create one in the future, they should start by looking through the other countries Syngenta accounts. As Instagram is less formal platform, and less current customers use it than Facebook, strict planning for the start of the account is not necessary. Key activities in the start should include more frequent posts, finding the right hashtags to use, in order to reach target groups, and following key customers and partners. Instagram posts can be used for updating and informing of company's activities, lighthearted and even humorous posts about varying topics, as well as occasional promotional posts. Instagram stories in turn are a great place to post videos for viewers to see almost in real time. These stories could include videos showcasing the use of the products and their benefits, both by a company employees and customers. Seeing entertaining or otherwise useful content on Instagram, as well as other social media platforms, builds the company image in the minds of the viewer, may they be customer, potential customer, stakeholder or partner company or organization.

### 6.3.4 Other media

Syngenta Finland has their own Youtube channel, where they post videos about current topics in the industry, Syngenta's operations in Finland, the use of their products and educational videos. Youtube is a great platform to post good quality videos that showcase the company's operations and values. The videos can be short advertisement

type videos or longer educational ones. An announcement video should be made once the app is launched, to inform viewers of its existence and to promote its benefits. Videos depicting the different stages of cereal growth and farmers activities in them, should include mentions of the app in the future. Youtube descriptions should always include links for further information and applications.

Twitter is used by the company as a platform to announce new products, innovations or other notable activities. Content posted on Syngenta's twitter is mainly aimed at the press and other influencers of the industry. The announcement and other possible following posts about the application, should grab the attention of the viewers. The post should emphasize the newness of the innovation and its user benefits.

It is important to note that Hankkija has their own social media pages as well. Creating content together and mentioning partners on each others pages, increases the visibility of both companies.

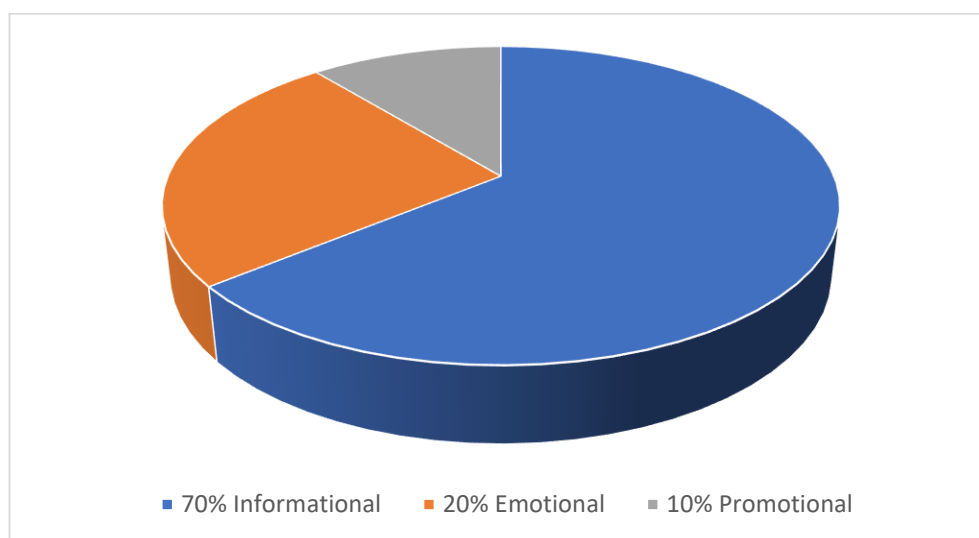


Figure 3. 70-20-10 Social media content rule (Chaffey, 2020)

### 6.3.5 Testimonial Marketing

Testimonials have a significant role in marketing. Customers usually want to know what they can expect from a product or a service. Testimonial marketing affects

customers emotionally, it is also more likely they will buy company's products after a recommendation from another customer than company's own direct marketing. Giving voice to already existing customers and partners in the company's social media, is an effective way of gaining trust and interest of potential customers. (Trustmary, n.d.)

As the major benefits of the application are the improvement of customer experience and the overarching improvement of the process and product, it is important for customers and potential customers to see its use through the lens of other customers. Syngenta has good connections to many of the end users of their products, that have been cooperating with the company in other social media projects. Having them show first hand the use of the products and mentioning the app and its benefits, on the company's social media, gives credibility to the company. The app should be mentioned on content related to it. The content created by or with the customers can be instructional in style, or as the use of the products takes time, updates throughout the growth season. Case studies could be done, to follow different customers journeys for one growth season. These should showcase first and foremost the products, but also the benefits of using data obtained from local weather stations.

With strong partner relationships, company's partners and stakeholders function as testimonial marketeers as well. Having them promote Syngenta's products and innovations on their social media platforms, helps to reach more potential customers.

## 6.4 Success Measuring

Measuring the success of different company activities provides not only a report of past and current performance, but a basis for future developments. With the information gained from success measuring a company can better set future goals and standards, identify and correct problems and document accomplishments.

As the innovation is new and the app's development in early stages, setting specific goals for its success can be hard. However the goals for the app and its marketing are well in line with the company's general goals for their business in Finland. As showcased in table 3. The customer journey, some of the company's goals are to develop customer service and better inform their customers of the use of their products.

The success of the innovation can be studied with the feedback given by customers. A user satisfaction survey could be sent to those who have registered in the app, or those who have consented, depending on the future analytics. An active questions and feedback channel should be established for the app and website, or a link to the existing ones. Getting feedback from farmers already in the development process of the app, will help the detailing further.

Both Syngenta and Hankkija survey the amount of website visitors they have within a certain timeframe. This can be implemented with the future app and website, as well as used as a success measuring method. Surveying the amount of visitors and those logged in, and the amount of time spent in the website or app, gives an impression of the customers interests.

Lastly in the future, short- and long-term receivables can be calculated and compared. Goals for both of the companies are to increase sales. If the innovation is successful, Syngenta can increase their market share, and the success can be measured in large-scale in future market research.

## 7 FUTURE GOALS AND DEVELOPMENTS

Syngenta is constantly developing their products and services to fit the needs of future. Making the data obtained from local weather stations easily available for farmers is a great marketing and product sale tool. This innovation answers a direct need in the market for better guidance in the use of PGR products. Syngenta's goal is to give their customers ever the better customer experience, by developing innovations like this.

Changes in the industry can be detected. The general attitude towards PGR use is neutral but shifting slowly towards critical. Stricter regulations are presented in the market. This is due to the lack of knowledge people generally have of PGR products. However PGR strongly supports sustainability of farming, which is a strong driving force in marketing. The use of data gained from local weather stations helps to make farming more efficient, making it all the more sustainable.

Syngenta is launching a third major product in Finland in 2022. The application once in use, though free for all, will recommend only Syngenta's products, and so function as an effective product support.

Syngenta's long term goals in Finland are to increase their market share, keep current customers and gain new ones, as well as expand their product selection. The goal of improving the general farming process and its product is also deeply rooted in the company values. Bringing out new products and innovations builds the company's status in the field. Attempting to predict the needs of the customers, stakeholders and society in general, in the future, enables the company to adapt and serve its customers better.



## 8 FINAL WORDS

Writing this thesis gave me a chance to look into agriculture industry in Finland and learn of all the influencers in it. With a marketing and customer satisfaction perspective I got to identify and study both the challenges and potential in the industry. After building a basic structure for my thesis, I took quite a freed approach to writing it, brainstorming and adding topics along the way. I have used mostly my own ideation and knowledge gained from schools, as well as consultation from the company, to write my thesis.

My thesis showcases only one innovation developed currently in the industry, but there are many others like it. Innovations to improve food security and sustainability of farming, are needed in the future. With even more information technology used in farming, the synchronization of data between devices and applications is something that will definitely be developed in the future. This could provide some interesting research topics.

I am excited to follow the development process of the use of local weather stations and its success in the future. I would like to thank Syngenta Finland for giving me the opportunity to study their operations more closely. Hopefully with my thesis I have been able to showcase some opportunities for them, as well as lay out the initiative plan for marketing the innovation.

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