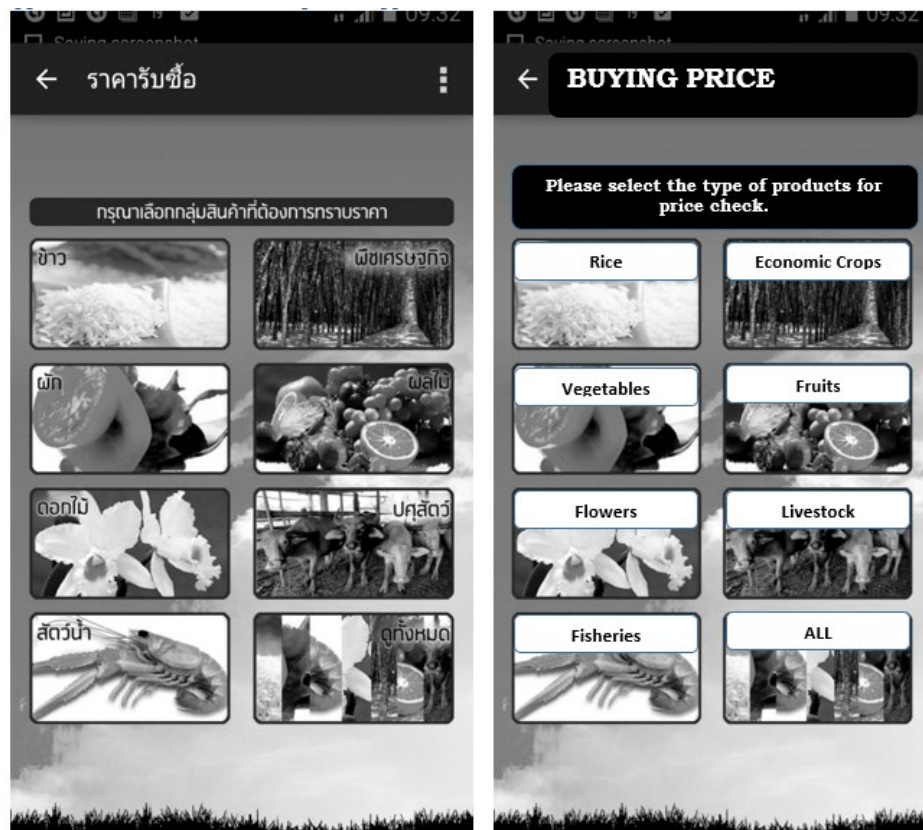


APPENDIX


APPENDIX 1: Farmer Info Smartphone Application Screenshots



Description:

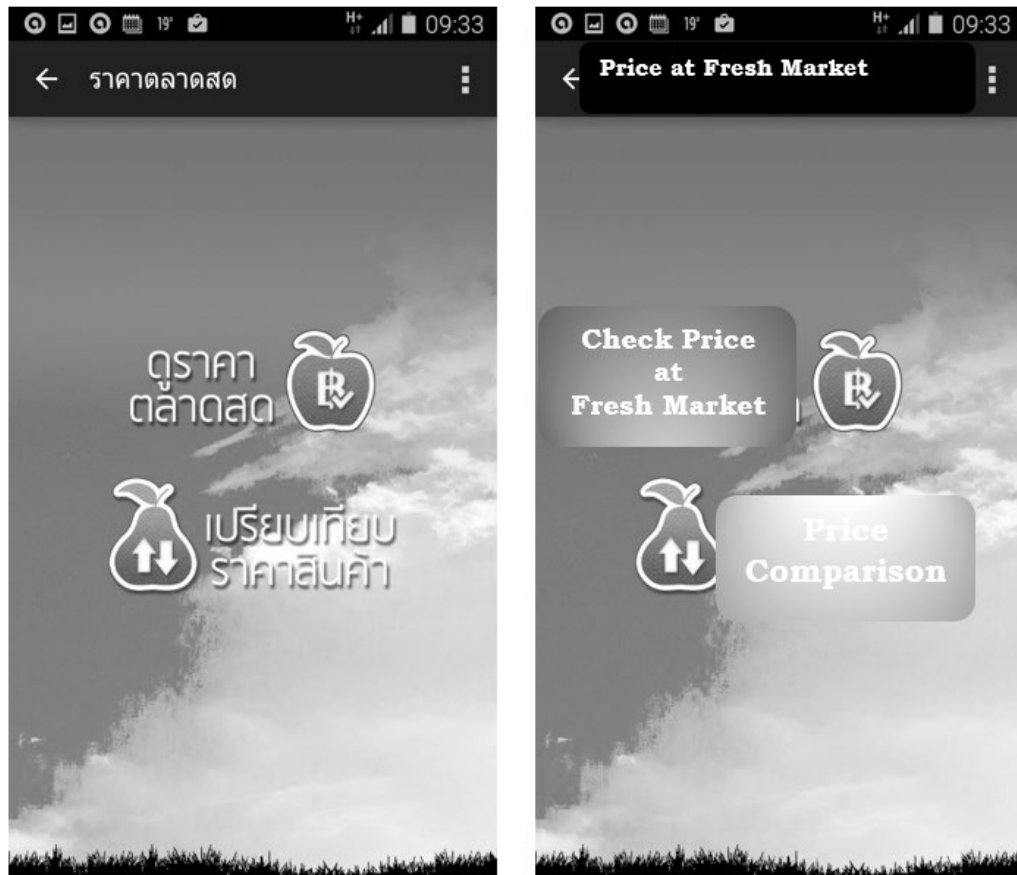
The first option for app-users is to check buying price for several locations nationwide. Thereby he can choose between various products, such as rice or vegetables, but also flower or livestock. The price will then be shown according to the selection.

← ดอกไม้ - 30 ธ.ค. 58	
 <div> <div>ดาวเรืองพันธุ์ทองเฉลิม</div> <div>จัมโบ้</div> <div>ไร่รักพอริถพอเพียง</div> <div>จ.นครราชสีมา</div> </div>	<div>1.20</div> <div>บาท/ดอก</div>
<div>ร้านแอ๊ด เจียมนวนาย</div> <div>จ.นครราชสีมา</div>	<div>1.20</div> <div>บาท/ดอก</div>
<div>ตลาดนัดดอกไม้สดวัดม่วง</div> <div>จ.นครราชสีมา</div>	<div>1.10</div> <div>บาท/ดอก</div>
<div>ร้านเหมียวดอกไม้สด</div> <div>จ.ชัยภูมิ</div>	<div>1.20</div> <div>บาท/ดอก</div>
<div>ดาวเรืองพันธุ์ทองเฉลิม</div> <div>เบอร์ 1</div> <div>ร้านแอ๊ด เจียมนวนาย</div> <div>จ.นครราชสีมา</div> <div>1.00</div>	
ดูข้อมูลเพิ่มเติมได้ที่ www.rakbankerd.com	

← FLOWERS - 30 Dec 2015	
 <div> <div>Marigold - Tongchalerm</div> <div>Jumbo</div> <div>RaiRak Vithee Poh Piang</div> <div>Nakhonrachasima Province</div> </div>	<div>1.20</div> <div>Baht/Flower ↑</div>
<div>AAD Jiemnuay Shop</div> <div>Nakhonrachasima Province</div>	<div>1.20</div> <div>Baht/Flower ↑</div>
<div>Wat Muang Fresh Market</div> <div>Nakhonrachasima Province</div>	<div>1.10</div> <div>Baht/Flower ↑</div>
<div>RaiRak Vithee Poh Piang</div> <div>Chiayapoom Province</div>	<div>1.20</div> <div>Baht/Flower ↑</div>
<div>Marigold - Tongchalerm</div> <div>Jumbo</div> <div>AAD Jiemnuay Shop</div> <div>Nakhonrachasima</div> <div>1.00</div>	
For more information www.rakbankerd.com	

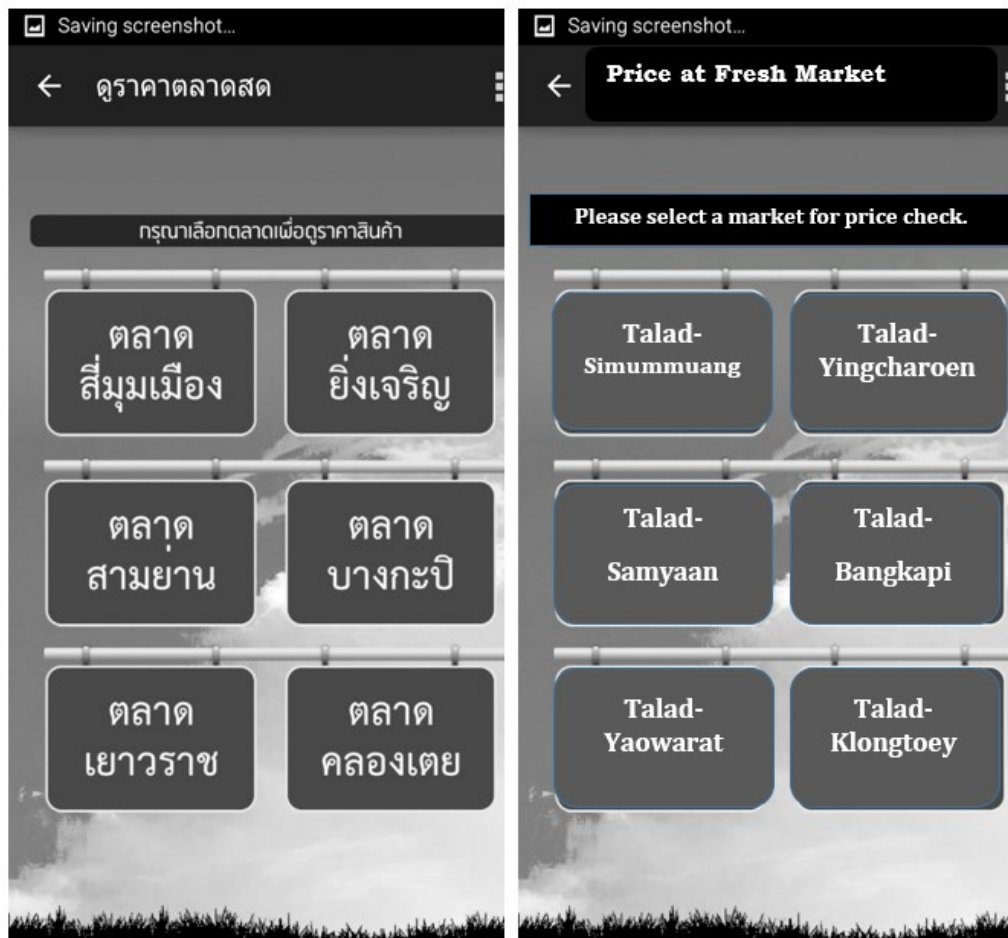
Description:

This picture shows one sub-menu of the buying price. In this case price for flowers, namely Marigold, on the 30th of December 2015 are highlighted. The screenshot highlights only a section of the available products. For each product, there is a selection of areas where prices have been collected. Thereby changes are highlighted by arrows pointing up, for price increases, and down, for price drops.



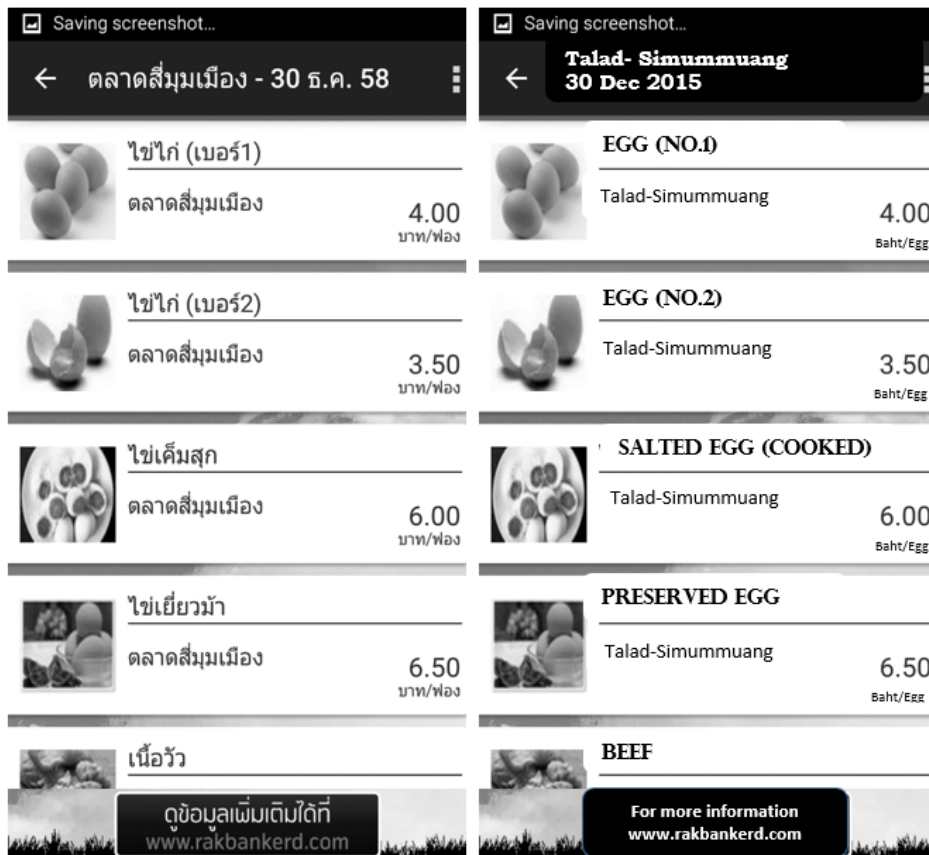
Description:

Another possibility for users to compare prices is to check the market price at the top six fresh markets in Bangkok. Thereby either a single market can be chosen, or prices for certain products can be compared to different markets in Bangkok.



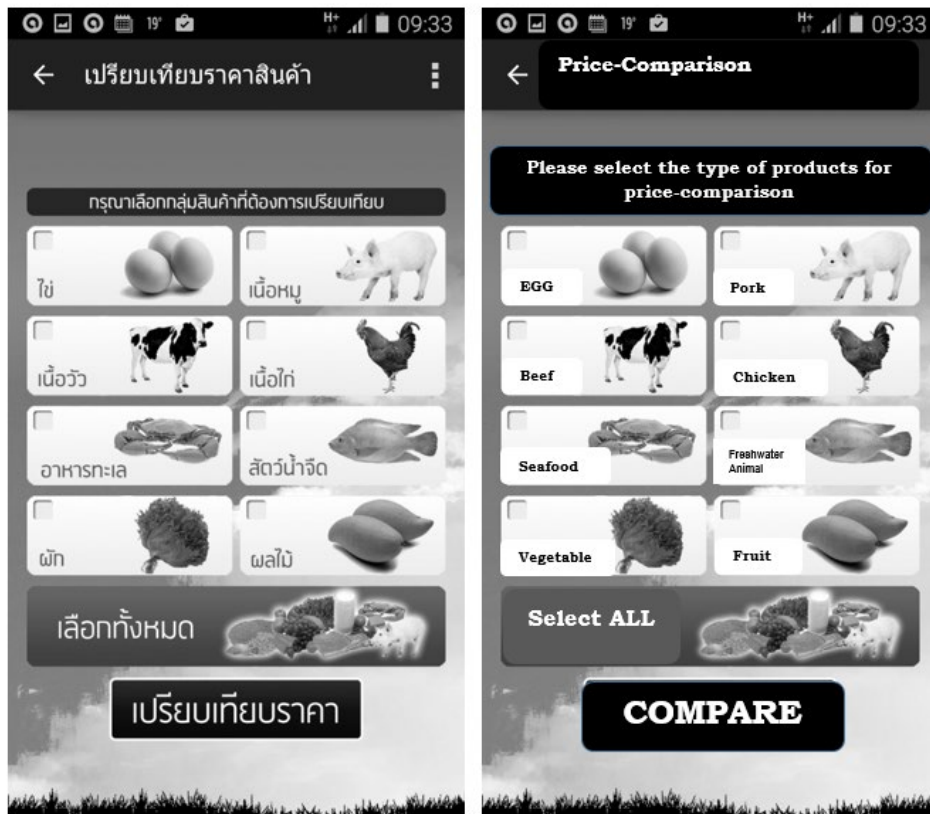
Description:

The application covers six fresh markets in Bangkok, namely Talad-Simummuang, Talad-Yingcharoen, Talad-Samyan, Talad-Bangkapi, Talad-Yaowarat and Talad-Klongtoey. For each market, the user can check the price for available fresh produce.



Description:

This screenshot illustrates a selection of products at the fresh market Talad-Simummuang on the 30th of December 2015. Price can be checked on a daily base to observe changes in the selling price.



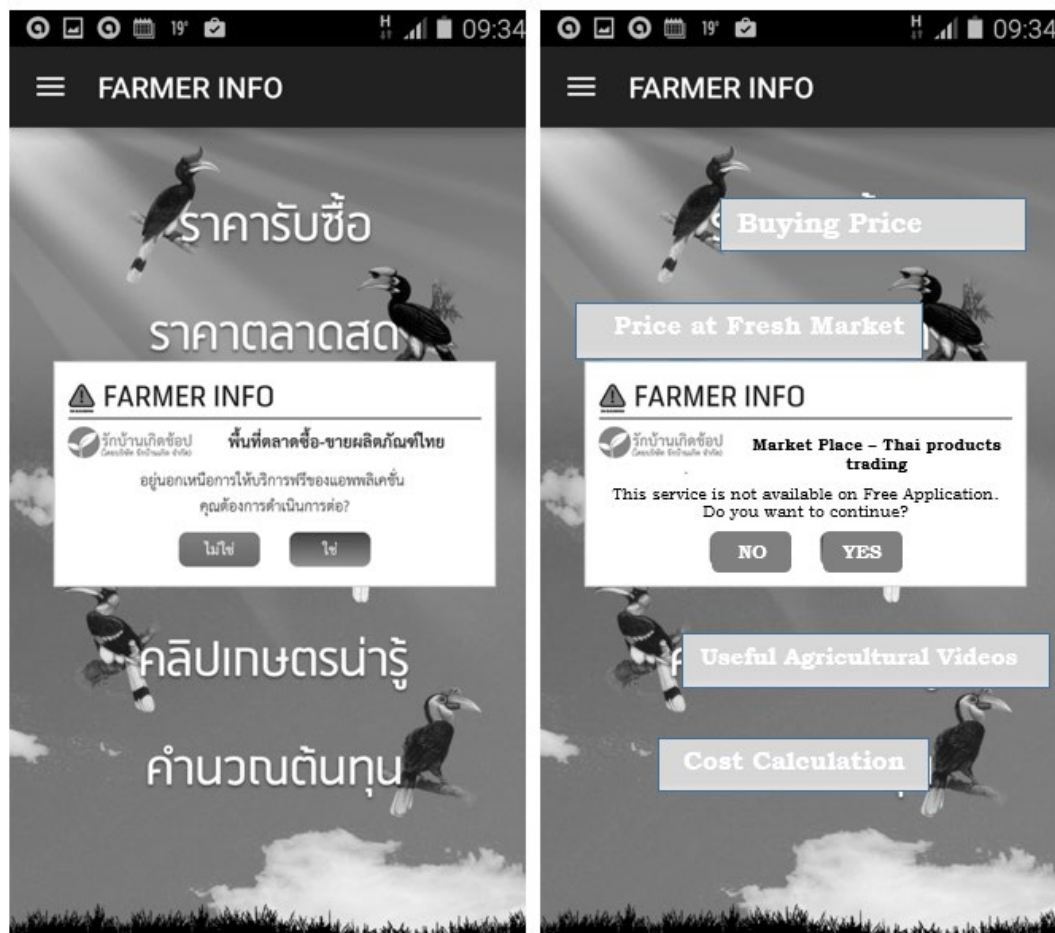
Description:

Besides checking single markets for various markets, all six markets can be compared by choosing certain products. This provides the users with the possibility to find the best price to sell their goods in Bangkok. The categories thereby cover various produce such as vegetables or fruits but also egg or freshwater products.

<div>← 30 ธ.ค. 58</div>	<div>← As of 30 December 2015</div>																								
<div>ไข่ไก่ (เบอร์1)</div> <table> <tr> <td>ตลาดคลองเตย</td><td>3.50</td></tr> <tr> <td>ตลาดสี่มุมเมือง</td><td>4.00</td></tr> <tr> <td>ตลาดยิ่งเจริญ</td><td>4.00</td></tr> <tr> <td>ตลาดบางกะปิ</td><td>4.00</td></tr> <tr> <td>ตลาดเยาวราช</td><td>4.20</td></tr> <tr> <td>ตลาดสามย่าน</td><td>4.70</td></tr> </table>	ตลาดคลองเตย	3.50	ตลาดสี่มุมเมือง	4.00	ตลาดยิ่งเจริญ	4.00	ตลาดบางกะปิ	4.00	ตลาดเยาวราช	4.20	ตลาดสามย่าน	4.70	<div>EGG (NO.1)</div> <table> <tr> <td>Talad-Klongtoey</td><td>3.50</td></tr> <tr> <td>Talad-Simummuang</td><td>4.00</td></tr> <tr> <td>Talad-Yingcharoen</td><td>4.00</td></tr> <tr> <td>Talad-Bangkapi</td><td>4.00</td></tr> <tr> <td>Talad-Yaowarat</td><td>4.20</td></tr> <tr> <td>Talad-Samyaan</td><td>4.70</td></tr> </table>	Talad-Klongtoey	3.50	Talad-Simummuang	4.00	Talad-Yingcharoen	4.00	Talad-Bangkapi	4.00	Talad-Yaowarat	4.20	Talad-Samyaan	4.70
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ตลาดสี่มุมเมือง	4.00																								
ตลาดยิ่งเจริญ	4.00																								
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ตลาดเยาวราช	4.20																								
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Talad-Bangkapi	4.00																								
Talad-Yaowarat	4.20																								
Talad-Samyaan	4.70																								
<div>ไข่ไก่ (เบอร์2)</div> <table> <tr> <td>ตลาดคลองเตย</td><td>3.30</td></tr> </table> <div>ดูข้อมูลเพิ่มเติมได้ที่ www.rakbankerd.com</div>	ตลาดคลองเตย	3.30	<div>EGG (NO.2)</div> <table> <tr> <td>Talad-klongtoey</td><td>3.30</td></tr> </table> <div>For more information www.rakbankerd.com</div>	Talad-klongtoey	3.30																				
ตลาดคลองเตย	3.30																								
Talad-klongtoey	3.30																								

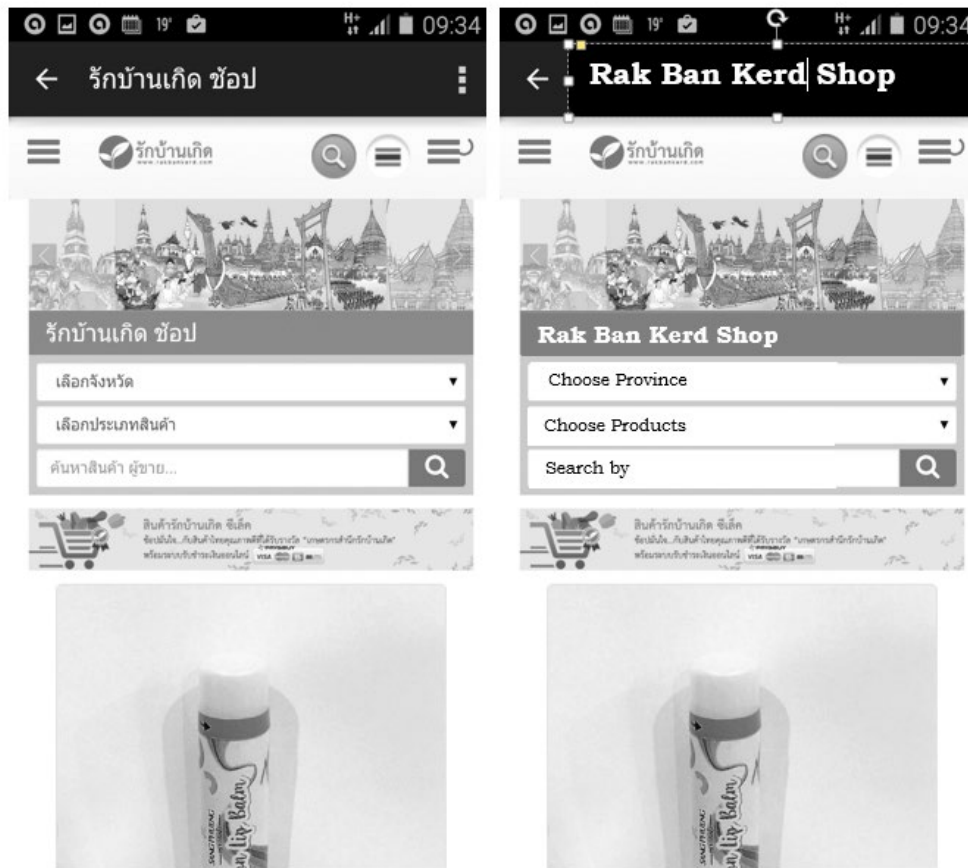
Description:

When selecting a product the user will see the different price in the six markets in Bangkok, highlighted in a clear table. In the screenshot from the 30th of December 2015, the price for egg (No.1) varies significantly within Bangkok, with price differences of 1.2 Baht.



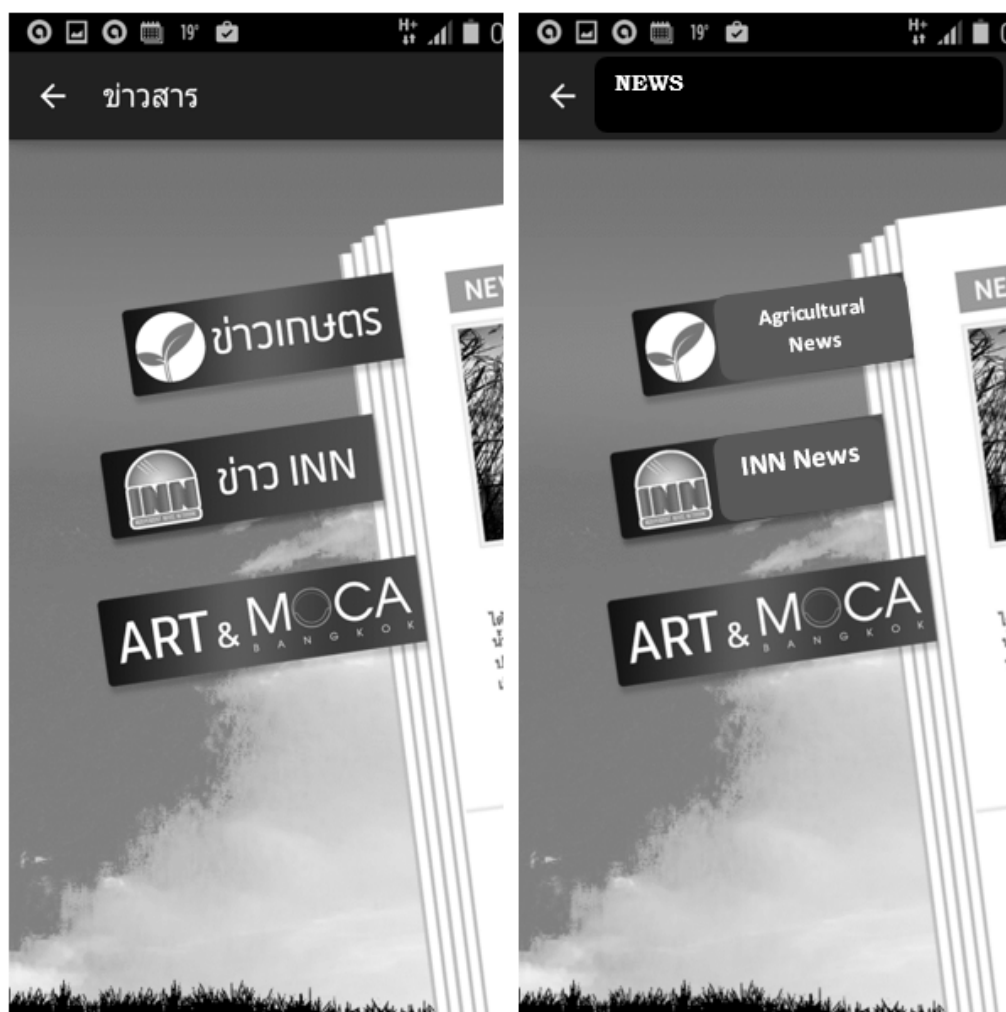
Description:

Another selling option is provided to the users by offering an e-commerce platform. The application directs the users directly to the e-commerce platform where they can either buy or sell products. The platform is not integrated into the application, and therefore charges can apply to the users. Out of this users are warned before leaving the application to the e-commerce platform.



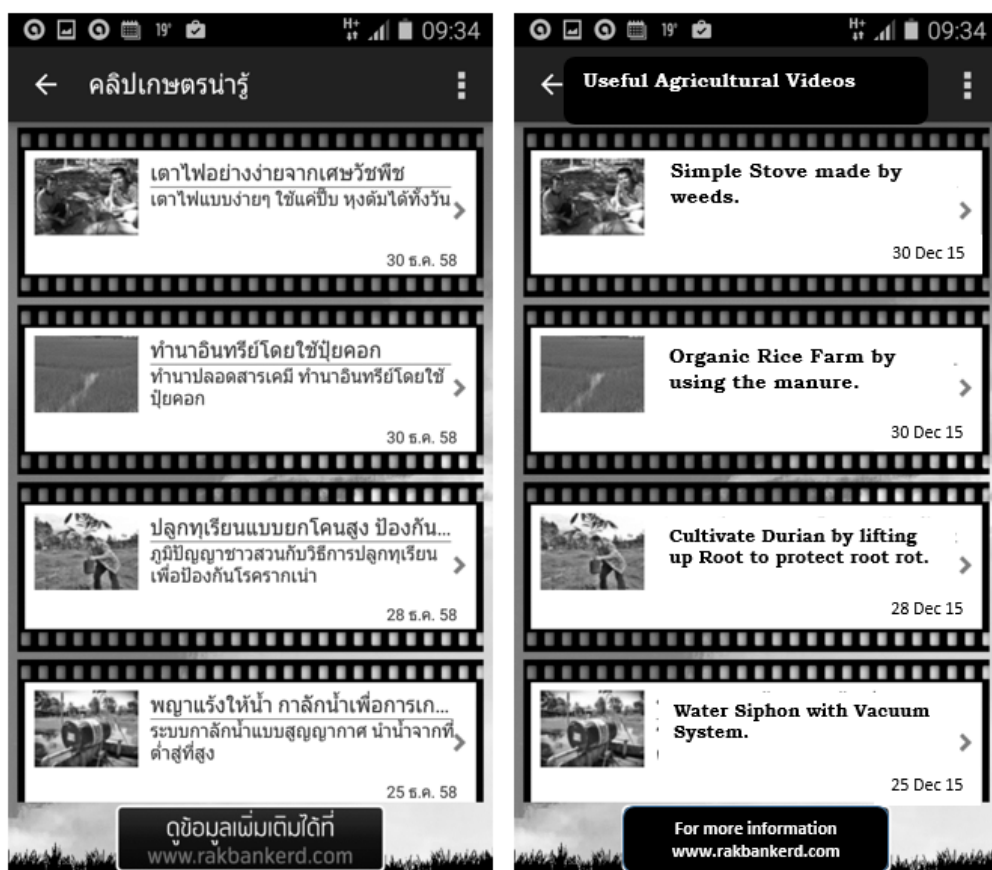
Description:

Once entered the e-commerce, users can choose between different provinces or products to find the most appropriate product for them. In case the user wants to sell a certain product he has to register with Rak Ban Kerd first to use the platform.



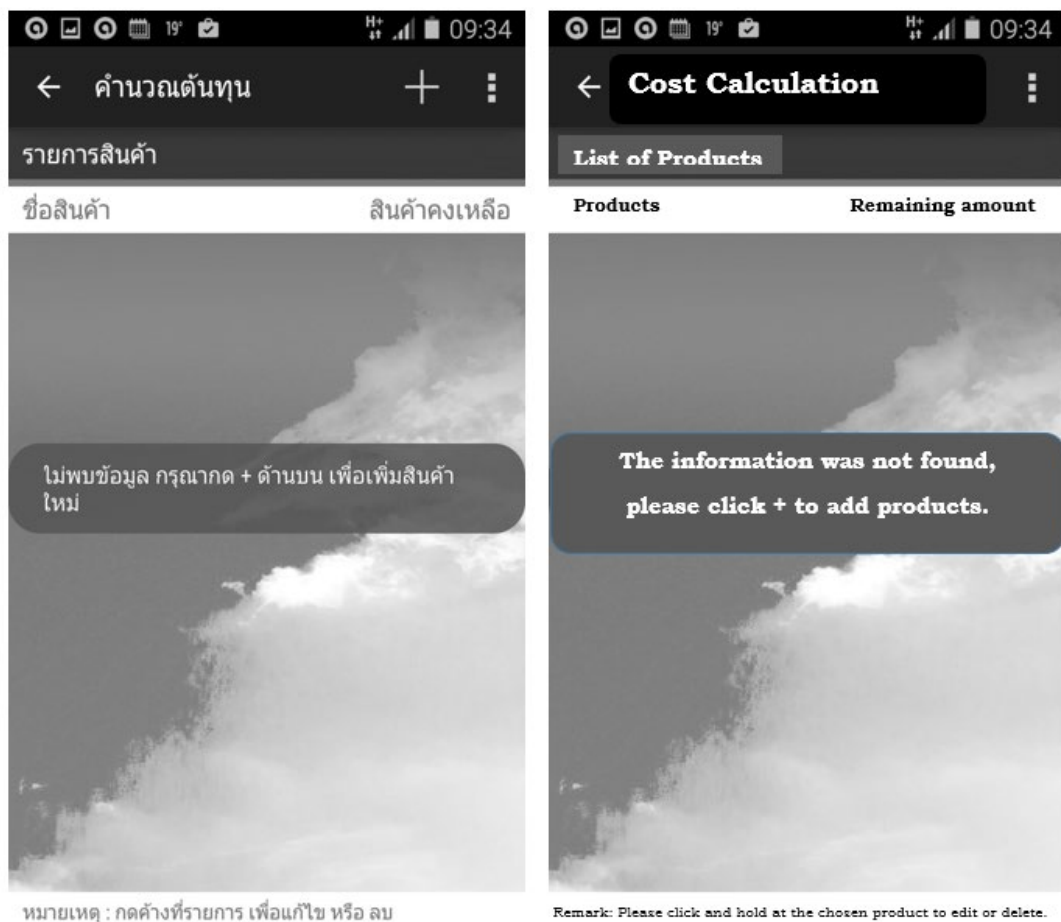
Description:

Apart from price information and online marketing, the app users can also access various information channels, providing them with up-to-date agricultural information about Thailand. However, also general and cultural news.



Description:

Another feature for knowledge and information dissemination of the application is the provision of videos to the users. The videos can be played free of charge and cover numerous aspects of agriculture. In this screenshot, the selection of videos covers introductions to organic rice production and durian cultivations but also guides for building a simple stove as well as a water syphon.



Description:

The last feature of the application provides the user with the possibility to track their costs. This will give the app-users the opportunity always to have an overview of all costs aligned with the agricultural work.

APPENDIX 2: Interview with Mr. Rawat Sangchuay

The Interview was conducted on Friday the 8th of January 2016. After a short small-talk with Mr. Rawat Sangchuay and the explanation on how the interview will be structured, the interview started. As the explanation included the presentation of the guiding questions, there is no clear starting point. During the presentation of the guiding questions to Mr. Rawat Sangchuay, he started already talking about the project and the foundation. #00:00:00-0#

Mr. Rawat Sangchuay: [Unclear] #00:00:12-8#

Mr. Jan Libera: Ok so. Also, the financing, because Rak Ban Kerd is a Non-Profit Organisation? #00:00:19-1#

Mr. Rawat Sangchuay: Ah. Rak Ban Kerd Foundation is a Non-Profit Organisation, but Rak Ban Kerd Company is a ... ah ... we need income, yeah. #00:00:30-5#

Mr. Jan Libera: So Rak Ban Kerd Company is supporting the foundation. #00:00:33-6#

Mr. Rawat Sangchuay: Ah. No. Ah. dtac support. #00:00:37-3#

Mr. Jan Libera: Ok #00:00:37-5#

Mr. Rawat Sangchuay: For Rak Ban Kerd Foundation and Rak Ban Kerd Company. #00:00:42-1#

Mr. Jan Libera: Also dtac is Rak Ban Kerd Company. #00:00:45-1#

Mr. Rawat Sangchuay: Ah. Support. #00:00:46-0#

Mr. Jan Libera: Ok. #00:00:46-5#

Mr. Rawat Sangchuay: Yes: Support two partner. #00:00:50-4#

Interruption by people from the radio station

Mr. Jan Libera: Yeah. It's dtac. So you mentioned to me already once, but what exactly is your job at Rak Ban Kerd Foundation. #00:01:11-7#

Mr. Rawat Sangchuay: Ah. To, ah, collect the data. Collect the data from nationwide and then we launch data for the farmer in nationwide by our channel. Example, application, SMS and website. www.rakbankerd.com that you have learned about it already. #00:01:36-8#

Mr. Jan Libera: And also work the radio? #00:01:40-3#

Mr. Rawat Sangchuay: No, no, no. #00:01:40-9#

Mr. Jan Libera: Not anymore? #00:01:41-6#

Mr. Rawat Sangchuay: No, no, no. #00:01:43-3#

Mr. Jan Libera: Because I saw for , I think dtac. The also work with radio stations to... #00:01:49-3#

Mr. Rawat Sangchuay: Yes, 103.5. #00:01:50-9#

Mr. Jan Libera: Ok. But Rak Ban Kerd is not ... #00:01:55-0#

Mr. Rawat Sangchuay: No, no, no. #00:01:55-4#

Mr. Jan Libera: Not involved in radio #00:01:56-6#

Mr. Rawat Sangchuay: The other partner of our service, that not involved each other. #00:02:02-6#

Mr. Jan Libera: Ok. And, äh, since when are you working for Rak Ban Kerd?
#00:02:11-5#

Mr. Rawat Sangchuay: Mh, 2005. #00:02:18-1#

Mr. Jan Libera: And, äh, SMS-application was launched in 2003? Is it right?
#00:02:22-9#

Mr. Rawat Sangchuay: Nationwide? #00:02:24-4#

Mr. Jan Libera: The SMS. #00:02:25-6#

Mr. Rawat Sangchuay: Äh, SMS and nationwide also.[Silence]. In Thailand we have 3 operators. Two service, our mobile and network. In Thailand we have dtac, we have True, AIS. This service is specially just only for dtac user. #00:02:52-7#

Mr. Jan Libera: And, who is the head of the Rak Ban Kerd Foundation? #00:02:59-4#

Mr. Rawat Sangchuay: Pardon? #00:02:59-9#

Mr. Jan Libera: The head. The head of the Rak Ban Kerd Foundation? #00:03:03-9#

Mr. Rawat Sangchuay: Äh, Khun Boonchai. #00:03:06-3#

Mr. Jan Libera: Can you write it down? #00:03:07-0#

Mr. Rawat Sangchuay: Ok. #00:03:07-4#

Mr. Jan Libera: Yeah, just. Khun Boonchai, ok. Is the former CEO from dtac.
#00:03:21-6#

Mr. Rawat Sangchuay: Äh, he is a chairman of dtac. #00:03:26-1#

Mr. Jan Libera: Ah, ok. #00:03:26-4#

Mr. Rawat Sangchuay: And chairman, and CEO of Rak Ban Kerd Foundation and also CEO of Rak Ban Kerd Company. #00:03:35-3#

Mr. Jan Libera: Ok. #00:03:35-8#

Mr. Rawat Sangchuay: Yes. Only man. #00:03:37-5#

Silence while Mr. Rawat Sangchuay writes down the positions of Mr. Boonchai

Mr. Rawat Sangchuay: CEO of Foundation, and, ah, no no, äh, chairman #00:03:51-2#

Mr. Jan Libera: Of dtac. #00:03:52-7#

Mr. Rawat Sangchuay: Chairman of dtac and foundation. And CEO of company. #00:04:02-5#

Mr. Jan Libera: And, when was the foundation founded? The Rak Ban Kerd. #00:04:07-6#

Mr. Rawat Sangchuay: Ähm, 17 years ago. #00:04:12-3#

Mr. Jan Libera: And do you know why the company was founded. What was the, foundation normally is ... #00:04:20-9#

Mr. Rawat Sangchuay: I interest in a , a farmer field. And, I come from a farmer's family in a Krabi province. In the south of Thailand. My father planned, you know palm, oil palm. Right. And purer rubber. And my friend is of, ah, a fisher. #00:04:47-5#

Mr. Jan Libera: Ok. #00:04:48-3#

Mr. Rawat Sangchuay: I found this project 10 years ago. And applied to work with them with my interesting and my skill about technology. To launch, to spread application or SMS to the, to the poor people in the urban, rural of Thailand. #00:05:19-3#

Mr. Jan Libera: So, the project was your idea, or? #00:05:23-1#

Mr. Rawat Sangchuay: Äh, my team, my team. #00:05:25-7#

Mr. Jan Libera: And. #00:05:26-8#

Mr. Rawat Sangchuay: I start with my team in, in about 10 years ago, 10 years ago. We have 3 people to create and to launch this project to the people. We start with the SMS service, äh, because we have many people in Thailand who use dtac, äh, operator. We have a mobile, mobile, mobile phone, äh, in the 2G of our service in a 10 years ago. Many people, everyone have a phone, to check about price, äh, knowledge, skill, äh, news about agricultural. Agricultural news, agricultural content is, make it easy. But in a 5 years ago, we launched application, because many people have a smartphone. Äh, not too expansive for farmer, for the Thai people in the Northern, in the Southeast, in the South of Thailand. Äh, we launched this project and this service already in a 5 year ago. #00:06:38-6#

Mr. Jan Libera: Ok. And Rak Ban Kerd Foundation was founded 17 years ago? #00:06:44-8#

Mr. Rawat Sangchuay: Yes. #00:06:45-6#

Mr. Jan Libera: Started, and. #00:06:46-6#

Mr. Rawat Sangchuay: On the first of the foundation, of, ah, we, we gave a scholarship for student in the poor family. But they are very good students with a leader. Ah, a leader, leadership of, in the good of people. They have a high score of, ah, their

study or something like that. Ah, but 10 years, we are already about the giving a scholarship to, to the students. They are in a bachelor or master degree now already.
#00:07:30-5#

Mr. Jan Libera: Ok. And ... #00:07:31-9#

Mr. Rawat Sangchuay: But we are moved our field of working to the farmer to support to upper the quality of life of the Thai farmer in nationwide. #00:07:44-6#

Mr. Jan Libera: Ok. And because I've, hear of the company the first time, I've never heard about Rak Ban Kerd Company. What is the company doing? #00:07:53-5#

Mr. Rawat Sangchuay: Ah. #00:07:54-1#

Mr. Jan Libera: What is the company involved? #00:07:55-9#

Mr. Rawat Sangchuay: Company, ah, come to cooperate, ah, website, SMS, application. Foundation is owner and company come to join, to cooperate, to launch, to co-working about foundation stuff. #00:08:22-2#

Mr. Jan Libera: So the company is doing the application, website and SMS? #00:08:26-5#

Mr. Rawat Sangchuay: Yes. #00:08:27-0#

Mr. Jan Libera: And the foundation is the owner of the ... #00:08:29-5#

Mr. Rawat Sangchuay: Yes, yes yes. #00:08:30-6#

Mr. Jan Libera: ... of the data or? #00:08:32-0#

Mr. Rawat Sangchuay: Of the data. #00:08:35-6#

Mr. Jan Libera: And do you have any other project of Rak Ban Kerd company or foundation? #00:08:42-8#

Mr. Rawat Sangchuay: Pardon #00:08:43-0#

Mr. Jan Libera: Do you have any other projects like ... or you only have the app, SMS and website, or? #00:08:48-7#

Mr. Rawat Sangchuay: Ah, we have a part of, to promote a Thai product. A Thai product like use from nationwide. In Thailand we ... OTOP. You have heard about OTOP? #00:09:06-0#

Mr. Jan Libera: Yes. #00:09:06-5#

Mr. Rawat Sangchuay: One Tamboon One Product. Tamboon is the sub district in village, right. We have to promote and open a space online for the farmers from nationwide to sell about their product just only as a souvenir or clothing or textile or the vegetable or agricultural project. Anything that is produced by the farmer. We have opened the space to promote and they can buying and selling free on our website. #00:09:49-8#

Mr. Jan Libera: So you also work close with the idea of OTOP or do you have your own brand? #00:09:55-7#

Mr. Rawat Sangchuay: We have own. We have our brand. Rak Ban Kerd rice product. From [Thai village name] in East of Thailand. You know Isaan? #00:10:11-2#

Mr. Jan Libera: Yeah. #00:10:12-1#

Mr. Rawat Sangchuay: Yes. In Isaan region of Thailand. From just only [Thai village and province name]. #00:10:23-1#

Mr. Jan Libera: How many? Do you have any idea how many farmers right now have the Rak Ban Kerd brand? How many products? How many farmers are using Rak Ban Kerd as a ...? #00:10:35-1#

Mr. Rawat Sangchuay: Oh. We have 10 product. #00:10:39-7#

Mr. Jan Libera: 10 products? #00:10:40-8#

Mr. Rawat Sangchuay: 10 product. #00:10:41-5#

Mr. Jan Libera: Are they only available online or you also have ...? #00:10:47-3#

Mr. Rawat Sangchuay: Just only our brand, right? But we have about 1000 product on our website. From nationwide. #00:11:01-4#

Mr. Jan Libera: So the website is, I checked it before, and it seems like it's like a ... #00:11:06-1#

Mr. Rawat Sangchuay: rakbankerd.com also #00:11:07-4#

Mr. Jan Libera: I saw it and it is like an online marketplace? #00:11:10-7#

Mr. Rawat Sangchuay: Yes. #00:11:11-4#

Mr. Jan Libera: So every farmer can sell their product online? #00:11:14-4#

Mr. Rawat Sangchuay: Yes, it's very efficiency for the farmer and it is very suitable for farmer, but easy to use and friendly for the user. #00:11:31-2#

Mr. Jan Libera: How do you or what does the farmer has to do to access? Does he just need to get username or password or ... #00:11:41-6#

Mr. Rawat Sangchuay: Yes, yes, yes #00:11:42-8#

Mr. Jan Libera: ... or he needs to pay to sell? #00:11:44-3#

Mr. Rawat Sangchuay: They have to apply on our website to get username or password, but we have 7 centre, 7 station in nationwide. They come to the village or community, the local community to introduce our service to many people to apply or to selling or buying their product on our website. #00:12:17-8#

Mr. Jan Libera: And how do you distributed the product? #00:12:21-5#

Mr. Rawat Sangchuay: Yeah? #00:12:22-7#

Mr. Jan Libera: How do you distributed the product? When the farmer sells it online, do you send it to the station in Chiang Rai and then to the consumer? #00:12:33-6#

Mr. Rawat Sangchuay: It isn't our business, because the [...] order any product, the owner will send and distribute by himself. #00:12:48-0#

Mr. Jan Libera: So the farmer has to send the product? #00:12:50-0#

Mr. Rawat Sangchuay: Yes. Just only we open online space to come and join and bargain or something like that on our website. Just like this. #00:13:03-3#

Mr. Jan Libera: So do you know eBay? #00:13:04-7#

Mr. Rawat Sangchuay: Yes. #00:13:05-4#

Mr. Jan Libera: So it's a similar ... #00:13:06-9#

Mr. Rawat Sangchuay: Similar, but in Thailand we have best buy. Do you know best buy? #00:13:10-9#

Mr. Jan Libera: No. Never. #00:13:11-9#

Mr. Rawat Sangchuay: Best buy is something like eBay. #00:13:14-9#

Mr. Jan Libera: Ok. #00:13:15-4#

Mr. Rawat Sangchuay: Something of eBay to control a financial system. We have a financial system for the upper farmer who have a credit card or smartphone. #00:13:31-3#

Interruption by staff from the radio station to give Mr. Rawat Sangchuay a present after he attended a meeting before our interview.

Mr. Jan Libera: Do we have to stop or? #00:13:45-1#

Mr. Rawat Sangchuay: No. #00:13:45-7#

Mr. Jan Libera: Now, after I have some background about Rak Ban Kerd itself, I would like to know a little bit more about the whole service. Like starting from the SMS to the application to the website to get a little bit more background information. My first question is: Normally when you start a project you have like certain ideas and goals like you want to achieve something. You start a SMS service to get a result or impact at the end. So what is your .. what are your goals for the ... why do you do the SMS service? #00:14:24-9#

Mr. Rawat Sangchuay: We invite the farmer from nationwide, about 1000 farmer come and meeting in the Bangkok, and set a question: What do you want? What do you want? What do you want? What is your goal? What is your problem? What is your process? In the same way of the people from nationwide. But we analyse their data to set our service. But many many of their opinion. But just only one joint opinion is better quality of life. Such as a better price for selling and the first of our SMS service to send to the many people is a price selling. Many many point. Example is: In Chiang Rai we have a 3 point or 3 market to selling lychee. We have a price from 3 place, 3 market.

The duty of farmer is: compare. Where is the price for you and you go there to sell your product. Just like that. #00:16:13-8#

Mr. Jan Libera: Ok, so. Price was ... the farmer farmer getting a better price is the main goal of the website, of the SMS and the application. #00:16:25-9#

Mr. Rawat Sangchuay: Yes. The most interesting data on our website, on our application or SMS is price checking. We have 7 station. We have staff in the 7 station to contact the place, contact the market. What is your price today? We call them in every morning: What is your price? What is your price? What's your price? And collect collect collect in our data, in our server and spread in every channel. The duty of farmer is to compare. What is the best, what is the best, what is the best and go there to sell their product. Rice, plant or fishery or something you produce, your product. #00:17:17-3#

Mr. Jan Libera: And you mentioned that you had focus group discussion when you started , with the 1000 farmers in Bangkok. Are there any documents or any records of this discussion? #00:17:29-9#

Mr. Rawat Sangchuay: Oh. It's 10 years ago. Maybe don't have it, the data of them. #00:17:37-1#

Mr. Jan Libera: And also you've mentioned that you, of course you collect price every day or every week ... #00:17:42-7#

Mr. Rawat Sangchuay: Every day. #00:17:43-9#

Mr. Jan Libera: How do you store? Do you store all the data or do you delete it after? #00:17:49-9#

Mr. Rawat Sangchuay: In our server? #00:17:52-0#

Mr. Jan Libera: Yes. #00:17:52-5#

Mr. Rawat Sangchuay: In our server at Rak Ban Kerd Company. #00:17:54-7#

Mr. Jan Libera: So you also still have data from 5 years ago? #00:17:58-1#

Mr. Rawat Sangchuay: Ah, 5 years ago. Maybe 5 years ago, yes. #00:18:04-9#

Mr. Jan Libera: So you could also see the price evaluation like ... #00:18:09-9#

Mr. Rawat Sangchuay: Yes, yes, yes. In the previous time, right? #00:18:13-5#

Mr. Jan Libera: Ok. #00:18:14-4#

Mr. Rawat Sangchuay: And you can search in our website to look in the previous time. Last year or two years ago or three years ago or something. #00:18:29-6#

Mr. Jan Libera: Only on the website or is it also possible in the application? #00:18:33-2#

Mr. Rawat Sangchuay: Ähm, website. Just only website. #00:18:37-1#

Mr. Jan Libera: And what was the theory behind the service? What was ... you wanted that the farmer can compare and check the prices? So what did you expect will happen? The farmer will get a higher price and get a better live quality? #00:19:02-5#

Mr. Rawat Sangchuay: Yes, absolutely that you said. #00:19:04-6#

Mr. Jan Libera: Ok. So means you would like to improve the livelihood of the farmer. #00:19:12-8#

Mr. Rawat Sangchuay: Yes. #00:19:14-9#

Mr. Jan Libera: And do you have any documents about the founding process, maybe about. Because when you do the ... or when you start a service you always, at the beginning, think about how to monitor the process, what do you expect at a certain level, for example after 5 years you want to see this. Do you also do data evaluation from time to time? #00:19:41-0#

Mr. Rawat Sangchuay: Yes. Not only a research by a formal process but we have deep interview with the people. We say success case that use application, SMS or website that better quality of life or something like that. We have a deep interview. I will send to you. #00:20:08-4#

Mr. Jan Libera: Yes, that would be very nice. #00:20:10-0#

Mr. Rawat Sangchuay: But you have to translate in English or something. #00:20:12-5#

Mr. Jan Libera: Yes, maybe I will try to use Google first and then my girlfriend can help me. #00:20:17-5#

Mr. Rawat Sangchuay: It's not difficult, yes. #00:20:19-3#

Mr. Jan Libera: But you don't, ... #00:20:20-3#

Mr. Rawat Sangchuay: I collect and prepared for you already. #00:20:23-8#

Mr. Jan Libera: Would be great, thanks. But you don't do surveys, like you also use quantitative? #00:20:31-0#

Mr. Rawat Sangchuay: No, no, no, because we have many many of user just only SMS we have 10,000 or 200,000 user. #00:20:46-4#

Mr. Jan Libera: 200,000? #00:20:47-5#

Mr. Rawat Sangchuay: Yes. Application about 100,000 people who download, who use application in daily. Many many of focus group. #00:21:04-2#

Mr. Jan Libera: Do the farmers also contact you? #00:21:06-2#

Mr. Rawat Sangchuay: Yes. By our call centre. You can call #1599. #00:21:15-2#

Mr. Jan Libera: And what does the call centre provide? #00:21:19-4#

Mr. Rawat Sangchuay: Äh, every data, every information in our application, website and SMS-service. #00:21:28-7#

Mr. Jan Libera: Äh, do you also have professional people, when there is someone asking a question about what pesticide, what fertilizer to apply? You can also call or is it more about price? #00:21:43-4#

Mr. Rawat Sangchuay: Äh, many people can call our call-centre and the staff in the call-centre we have trained for the best of the staff to respond or answer the difficult question of the farmer just as the price or skill or higher skill, you know. A higher skill and many many of the question that we have never known before. If we have problem, problem disease or storm, disaster or any question, but we have a staff that we have trained already to respond every every quotation, every every question of the people. #00:22:34-9#

Mr. Jan Libera: And, äh, the number is #1677, or? #00:22:41-0#

Mr. Rawat Sangchuay: Äh, no. 1599. #00:22:46-1#

Mr. Jan Libera: Ok. #00:22:46-9#

Mr. Rawat Sangchuay: We have changed it. #00:22:48-1#

Mr. Jan Libera: Yes, before it was 677. #00:22:51-8#

Mr. Rawat Sangchuay: Last year, last year. #00:22:52-6#

Mr. Jan Libera: And the number is also only for dtac users? #00:22:56-2#

Mr. Rawat Sangchuay: Yes. #00:23:00-0#

Mr. Jan Libera: Why did you choose only to work with dtac? Why didn't you work with AIS or TrueMove, too? #00:23:12-4#

Mr. Rawat Sangchuay: I don't have choose, dtac choose the service cost. We use all data system of dtac. dtac support us and dtac is main sponsor, main financial sponsor from our company, our foundation. #00:23:35-7#

Mr. Jan Libera: Ok, so ... #00:23:36-1#

Mr. Rawat Sangchuay: This service is a speciality from dtac. #00:23:40-2#

Mr. Jan Libera: So Mr. Boonchai invited you 10 years ago, when you started with your team? #00:23:50-0#

Mr. Rawat Sangchuay: Yes. #00:23:50-5#

Mr. Jan Libera: And because 10 years ago he was already chairman of dtac? #00:23:54-6#

Mr. Rawat Sangchuay: Yes, yes, yes. #00:23:56-2#

Mr. Jan Libera: So this was why. #00:23:57-5#

Mr. Rawat Sangchuay: 20 years ago he is chairman of foundation, he is a chairman of dtac and a CEO of ... oh no ... CEO Rak Ban Kerd is 10 years ago. #00:24:07-2#

Mr. Jan Libera: Ok. And just maybe short drawing about how this service .. how I understand that the system works. The first step is you collect data ... #00:24:22-0#

Mr. Rawat Sangchuay: May I have draw for you? #00:24:25-3#

Mr. Jan Libera: Ok. Because sometimes it is easier if you draw ... #00:24:28-2#

Mr. Rawat Sangchuay: Yeah you should know that #00:24:29-2#

Mr. Jan Libera: Ok. #00:24:39-9#

Mr Rawat Sangchuay draws on the paper with the guiding questions.

Mr. Rawat Sangchuay: Collect data. Collect data to our server. www.rakbankerd.com we have a staff. BKK. Bangkok. To edit. To launch. Our destination is farmer. #00:25:29-4#

Mr. Jan Libera: Ok. And the farmer then can at least interact with the application and the website again when he wants to sell the product. Selling the product you can do by application and by website? #00:25:46-0#

Mr. Rawat Sangchuay: Yes, yes, yes. They can do by application and our website. Do you know who we contact to receive a data? #00:25:58-9#

Mr. Jan Libera: No. #00:26:00-0#

Mr. Rawat Sangchuay: Farmer. #00:26:01-4#

Mr. Jan Libera: So farmer at the market, or? #00:26:03-8#

Mr. Rawat Sangchuay: Farmer, farmer who is a guru. Who is a guru, who had a leader of farmer, who have knowledge, skill and better attitude. #00:26:19-4#

Mr. Jan Libera: And from him you collect data for the prices or what kind of data you collect from him? #00:26:26-8#

Mr. Rawat Sangchuay makes some adjustments to the drawing.

Mr. Rawat Sangchuay: Mh, from, from a leader of farmer. Guru. Knowledge, skill, I mean agricultural skill, right. Their philosophy, agricultural. Market. Owner. Buying product, agricultural product. That we collect, collect, collect, collect, collect, [...] to our server and we have a staff in Bangkok, in Rak Ban Kerd Company, to edit, to release, to edit our data to our service and then we launch to the farmer nationwide by SMS, by application or website to the farmer, general farmer. #00:27:52-8#

Mr. Jan Libera: But, when you collect the price. The price you collect at the market is from traders, or? When your team is going out to the market, they are going to the trader at the market to collect the price. #00:28:09-9#

Mr. Rawat Sangchuay: Yes, yes, yes #00:28:11-0#

Mr. Jan Libera: And from the ... #00:28:11-2#

Mr. Rawat Sangchuay: In every morning. #00:28:12-1#

Mr. Jan Libera: And from the farmer you can, I saw you have videos, ... #00:28:15-9#

Mr. Rawat Sangchuay: Yes #00:28:16-4#

Mr. Jan Libera: So something like this you collect from him? Like best practice? #00:28:21-0#

Mr. Rawat Sangchuay: By text, video clip, deep interview with the school of the leader of farmer. #00:28:31-3#

Mr. Jan Libera: Mhm. And do you also promote something like organic agriculture? #00:28:38-1#

Mr. Rawat Sangchuay: Yes. Our, one of our philosophy, one of our [...] goal, is organic, agricultural organic. Less for chemical, we support and promote the organic, for the first priority, our first priority. #00:29:04-6#

Mr. Jan Libera: Do you have a document where it is possible to see the different philosophies you are following? You want to improve the livelihood of the farmer, you want to promote sustainable or organic agriculture? #00:29:20-4#

Mr. Rawat Sangchuay: Yes, yes, yes #00:29:21-5#

Mr. Jan Libera: Do you have a document where it is written what you want to achieve with the program? #00:29:27-8#

Mr. Rawat Sangchuay: Hm, ähm. Less documentary about something like that. We are contact the leader or guru and collect their data in our website. You can search many many of organic data, organic case, organic example in our website. #00:29:53-3#

Mr. Jan Libera: Ok. #00:29:53-4#

Mr. Rawat Sangchuay: Many many of data. #00:29:56-6#

Mr. Jan Libera: Mhm. And you mentioned that you have already 7 station around Thailand. Which provinces do cover by them? #00:30:07-9#

Mr. Rawat Sangchuay: About 40 province in Thailand. #00:30:11-4#

Mr. Jan Libera: And which locations are ... #00:30:17-0#

Mr. Rawat Sangchuay: And more and more in next years. We are expand to 45 and expand to 50 province in the next of next next next year. #00:30:27-9#

Mr. Jan Libera: And the 7 teams are right now, they are right now in Chiang Rai? #00:30:32-1#

Mr. Rawat Sangchuay: Yes. #00:30:33-0#

Mr. Jan Libera: And where else? #00:30:34-3#

Mr. Rawat Sangchuay: Mh, Khon Khaen, Ubonratchatani, Nakhon Ratchasima, ... #00:30:50-0#

Mr. Rawat Sangchuay starts to write down the locations.

Mr. Jan Libera: Ähm, maybe easier. #00:30:50-0#

Mr. Rawat Sangchuay: Ubonratchatani, Chantaburi, Nakhon Si Thammarat, Chumpon, ... #00:31:18-9#

Mr. Jan Libera: Ah, Chumpon, too. #00:31:20-6#

Mr. Rawat Sangchuay: 1, 2, 3, 4, 5, 6, 7 #00:31:27-4#

Mr. Jan Libera: Ok. And what are the different teams are doing? They collect the price and they are also going to the gurus. But also do they go to the farmers who are using the SMS-service, the application, ... #00:31:43-3#

Mr. Rawat Sangchuay: Yeah, the same mission, the same mission. #00:31:46-0#

Mr. Jan Libera: Ok. #00:31:46-3#

Mr. Rawat Sangchuay: Our 7 team nationwide. #00:31:49-9#

Mr. Jan Libera: So you also try to teach the farmer on how to use the application?
#00:31:54-3#

Mr. Rawat Sangchuay: Yes, yes, yes. One of their mission is teach our farmer to use a smartphone, to post their product to our website, to respond something with us, our team on application and use our call-centre. #1599 already. #00:32:22-0#

Mr. Jan Libera: And do you know, how is the reaction of the farmers, because maybe some ... #00:32:28-0#

Mr. Rawat Sangchuay: Smiley. #00:32:29-1#

Mr. Jan Libera: Yeah? #00:32:29-5#

Mr. Rawat Sangchuay: Yes. One part is smiley: is very easy, I have never known, but the other part: very difficult. They cannot access but our first priority, first method is connect the unconnected. #00:32:53-3#

Mr. Jan Libera: Yeah, I saw the video at dtac. #00:32:57-0#

Mr. Rawat Sangchuay: Yes, yes, yes. #00:32:59-5#

Mr. Jan Libera: So you train the farmers on using smartphones, using the internet?
#00:33:03-8#

Mr. Rawat Sangchuay: Yes, yes, yes. By our project Connect the Unconnected.
#00:33:08-5#

Mr. Jan Libera: And you have the dtac, Rak Ban Kerd ... #00:33:14-1#

Mr. Rawat Sangchuay: Foundation. #00:33:16-2#

Mr. Jan Libera: Comp... Foundation and Company? #00:33:17-9#

Mr. Rawat Sangchuay: Yes. #00:33:18-7#

Mr. Jan Libera: Do you have any other co-operation partners? Do you work with Ministry of Agriculture or NGOs or any other? #00:33:30-8#

Mr. Rawat Sangchuay: Our partner? Our partner is Farmer Bank to give us selling price in the other places, our team that reach the price at the other place, launch to ours, our data of server by Farmer Bank and Agricultural and Cooperative Ministry. Ah, Ministry of Agriculture and Cooperatives. #00:34:10-0#

Mr. Jan Libera: Ok. Good. #00:34:11-1#

Mr. Rawat Sangchuay: In Thai we say [something in Thai]. #00:34:13-3#

Mr. Jan Libera: Yeah I heard. #00:34:14-9#

Mr. Rawat Sangchuay: [Repeats Thai word] #00:34:16-2#

Mr. Jan Libera: O. The Ministry of Agriculture and Cooperatives. So you have Famer Ban and the Ministry. You work with any other? #00:34:25-2#

Mr. Rawat Sangchuay: Ähm, the other party is a short-term in first year, second year or third year. For a long time it is Ministry of Agriculture and Cooperatives and Farmer Bank. We still co-working together. #00:34:45-8#

Mr. Jan Libera: So I also saw that the Ministry of Agriculture has also some applications. Do you exchange like ideas and knowledge or? Because I saw that the Ministry of Agriculture has also own applications. #00:35:03-1#

Mr. Rawat Sangchuay: We have shared our idea in every 6 month with our co-meeting. Co-meeting to develop each application or something we can connect the data or information, ah, on some function we cannot connect, because the mission of Farmer Bank is one thing and mission of Ministry is the other one. We cannot connect. Because we have each target group. Destination is different. #00:35:44-0#

Mr. Jan Libera: And did you, for example, ever connected with NECTEC? Because they also work a lot with ... #00:35:51-7#

Mr. Rawat Sangchuay: Selling price. First is selling price. Ministry of Agricultural and Cooperatives suggest Rak Ban Kerd Foundation to produce some place to promote, to caution, to teach some of the farmer to use application. That employed officer cannot do, is very very difficult. But we have a more professional, more skilled to connect, to train local people, more than officer of Royal Government, something like that. #00:36:32-4#

Mr. Jan Libera: And right now, how would you say, how satisfied are you with ... #00:36:38-0#

Mr. Rawat Sangchuay: Pardon? #00:36:38-5#

Mr. Jan Libera: How satisfied are you with the project right now? What is your opinion? Your honest opinion about. Would you ... #00:36:47-2#

Mr. Rawat Sangchuay: We have more and more effort to develop application, our service. The develop of our service is more and better quality of life of the Thai farmer. We have more and more efforts to develop our service. #00:37:13-3#

Mr. Jan Libera: So you are happy what you achieved so far or you wanted to achieve more at this point? #00:37:18-0#

Mr. Rawat Sangchuay: Äh, I am very happy to do that, but we have to collect more and more data. For example, the price of selling the agricultural product here, more and more point, more and more market, so the farmers can compare. More choice for the better, for the highest price for selling their product. #00:37:48-3#

Mr. Jan Libera: Mhm. So you also want to have more products? Because right now you still have not all the products available, for example, I saw no roses, for example. #00:37:59-1#

Mr. Rawat Sangchuay: We wish to collect more and more product in our website, not only [...] rubber, oil palm, fruit or vegetable. We have to reach more and more for flower. Flower, orchid, rose, lotus, or something like that. That is a new choice for the farmer. Now we have, Thailand has a problem with water to agricultural produce is very difficult to do that. Now this year, 2016, we, we set important method and important work about to promote the farmer who have a less of water. Their scare is survive in this situation. Stronger together, something like that. #00:39:08-2#

Mr. Jan Libera: And there is one more question about this. What do you plan to, because you told me that the SMS-service will be cancelled by the end of the year? #00:39:18-8#

Mr. Rawat Sangchuay: Yes. #00:39:18-9#

Mr. Jan Libera: And you will focus more on the application? #00:39:21-8#

Mr. Rawat Sangchuay: We, we will remove, invite and please for the farmer to use application. You know, 100,000 of people who use mobile phone, that use our SMS-service. Their mobile phone, smartphone already, but they don't know our application.. They don't know our application and how to access our service. We have to send out our

staff in any place to train, to acknowledge the people, to empower, to educate the people. Please use our application, it doesn't difficult mission for us, but we have to much effort for this mission. #00:40:33-0#

Mr. Jan Libera: So do you also have like commercial campaign, because I don't watch TV or listen. Do you have spots? #00:40:42-3#

Mr. Rawat Sangchuay: Dtac. It is the duty of dtac to promote via mass communication. Mass communication is by dtac. Last year we have more and more promote about this. #00:41:00-2#

Mr. Jan Libera: So are you satisfied with the funding or what, I don't know, you don't have to say a specific number, but maybe estimate how much funding the whole project get? #00:41:16-9#

Mr. Rawat Sangchuay: Yearly? #00:41:19-9#

Mr. Jan Libera: Yeah. #00:41:20-6#

Mr. Rawat Sangchuay: Mh ... About 20, 20 million #00:41:27-9#

Mr. Jan Libera: Baht? #00:41:29-9#

Mr. Rawat Sangchuay: Baht. #00:41:30-7#

Mr. Jan Libera: Ah ok. #00:41:31-4#

Mr. Rawat Sangchuay: [Laughs] I wish Euro. But dtac give me a Baht. #00:41:38-7#

Mr. Jan Libera: And, ähm ... #00:41:41-5#

Mr. Rawat Sangchuay: 20 to 30 million yearly. #00:41:47-3#

Mr. Jan Libera: Is there any ... äh #00:41:51-7#

Mr. Rawat Sangchuay: Every service channel right #00:41:54-1#

Mr. Jan Libera: This is for the SMS, the application and the website? #00:41:57-8#

Mr. Rawat Sangchuay: Whole service. #00:41:58-9#

Mr. Jan Libera: For everything? #00:42:00-6#

Mr. Rawat Sangchuay: Everything. For everything. #00:42:02-3#

Mr. Jan Libera: Everything including the ... By everything we are talking now about the whole foundation? #00:42:09-6#

Mr. Rawat Sangchuay: And our staff. #00:42:10-7#

Mr. Jan Libera: Ok. #00:42:11-3#

Mr. Rawat Sangchuay: Yeah, yeah. Our staff, our cooperation, management, back office, server, development, course, or something, everything. #00:42:23-2#

Mr. Jan Libera: So this is more or less what you would earn as a company? This is our income? #00:42:29-6#

Mr. Rawat Sangchuay: Less and less, less and less, less and less #00:42:34-4#

Mr. Jan Libera: Ok. And is there any idea to cooperate with other mobile providers? You want to cooperate with True Move or AIS? #00:42:47-4#

Mr. Rawat Sangchuay: No. #00:42:47-0#

Mr. Jan Libera: No? #00:42:47-7#

Mr. Rawat Sangchuay: No, no, no. Dtac policy. Just only for, specially for our customer, dtac customer. But do not forget that on our website the user of our operator can use the data on the website. Is an open information. #00:43:16-3#

Mr. Jan Libera: So the website is open but ...? #00:43:18-3#

Mr. Rawat Sangchuay: Is open for the Thai people, for the global user. #00:43:27-2#

Mr. Jan Libera: But the SMS, the application and the hotline are only for dtac users? #00:43:32-8#

Mr. Rawat Sangchuay: Only for dtac users. #00:43:35-3#

Mr. Jan Libera: How, do you know what is the market share of dtac right now? #00:43:40-3#

Mr. Rawat Sangchuay: Ähm, about 28 million user for dtac. #00:43:54-1#

Mr. Jan Libera: And do you know, because I already did a small survey with my professor in the hills, but was part of another work, and I saw that a lot of farmers are using AIS. #00:44:06-5#

Mr. Rawat Sangchuay: Yes, yes, yes. In the local area, in the local community use AIS. Because the better network or data or something like that. But we are still promote our service to the people. #00:44:35-8#

Mr. Jan Libera: And are you aware, is dtac expanding like building up infrastructure to improve their service? #00:44:44-7#

Mr. Rawat Sangchuay: Mhm. #00:44:46-8#

Mr. Jan Libera: And now again back to the project. What is the plan for the future? What do you want to ... #00:44:56-5#

Mr. Rawat Sangchuay: This year or next years? #00:44:58-1#

Mr. Jan Libera: Maybe short-term but also long-term. Like, for example, what would you like ... #00:45:02-8#

Mr. Rawat Sangchuay: Short-term in 2016 we are set our important mission to help farmer survive in a less water situation, situation. By our [.../person], by our launch about information or data that they can use in a less water situation. How they can plant, how they can life How they can agricultural process in this situation. This is our short-time. For long-term we will approve our application in the middle of the year, in May or June. Important mission is, make it easy, make easy and friendly for user. But from our deep interview some of the farmer in our 7 station, is very difficult, is very difficult. What is the meaning of Farmer Info. The Thai people or the farmer cannot understand Farmer Info. It stand for information. But farmer who have a less education don't understand. Farmer, what is farmer. Is suitable for you [looking at me], Farmer Info word is suitable for you, for a foreigner. Maybe next year or 2020 we have to change this name. Re-branding or maybe an application name [Thai words], or something like that. Is friendly and easy, easier for the farmer. #00:47:17-1#

Mr. Jan Libera: And ... #00:47:18-9#

Mr. Rawat Sangchuay: And I include a function in our application also. #00:47:23-8#

Mr. Jan Libera: Yeah. Maybe before we come to the application again, I, you mentioned that you want to help the farmers with the less water? And how you want to do that? You will produce videos and text and then you will send it by the application and website? #00:47:38-6#

Mr. Rawat Sangchuay: Every data, every channel. #00:47:40-8#

Mr. Jan Libera: Ok. #00:47:41-6#

Mr. Rawat Sangchuay: By this policy. This policy[...]. Next time I invite you to come to my company. #00:47:53-1#

Mr. Jan Libera: Yeah. It would be interesting to see. See the server ... #00:47:55-9#

Mr. Rawat Sangchuay: Staff and process of our working. Collect data, how to edit, how to launch. Very interesting. #00:48:07-0#

Mr. Jan Libera: Yeah. Would be really interesting. And for the application, when I looked at it, I saw, for example, there is no weather information. There ... Because often you see that farmers want to know more about the weather or other things. Do you want to expand the application too? Do you want to add more features? #00:48:31-0#

Mr. Rawat Sangchuay: Oh yes. Our next plan, next planning about develop application about the weather. Weather information is more and more interest for Thai farmer but in our SMS-service we launch weather. So weather information or weather content every day. #00:48:56-0#

Mr. Jan Libera: Ok. #00:48:56-5#

Mr. Rawat Sangchuay: Oh, you use AIS right? #00:48:59-2#

Mr. Jan Libera: No. I have True Move, but I also bought ... #00:49:02-8#

Mr. Rawat Sangchuay: [Laughs] In the SMS #1599 we launch every day. Is raining, is cold, something like that. #00:49:13-5#

Mr. Jan Libera: I tried, I bought a dtac SIM-card, so I can try. I have one at home. #00:49:18-3#

Mr. Rawat Sangchuay: Good. #00:49:19-4#

Mr. Jan Libera: And now the question is, that just popped into my mind, the SMS-service, is it for free or do the farmer has to pay for the SMS when he calls ...
#00:49:30-9#

Mr. Rawat Sangchuay: Äh, free. #00:49:30-7#

Mr. Jan Libera: 1599 is free? So the information he gets for free? #00:49:36-1#

Mr. Rawat Sangchuay: Free. #00:49:37-0#

Mr. Jan Libera: Ok. #00:49:37-0#

Mr. Rawat Sangchuay: Free. Everything is free and specially for dtac. Free, free, free, free. #00:49:44-8#

Mr. Jan Libera: Ok. And ... #00:49:45-1#

Mr. Rawat Sangchuay: But the dtac user can forward to the True Move user, are you?
#00:49:51-4#

Mr. Jan Libera: [Laughs] #00:49:52-9#

Mr. Rawat Sangchuay: [Laughs] #00:49:53-4#

Mr. Jan Libera: So, how you want to reach more farmer, because, as we talked, in rural areas AIS maybe is more present and farmers are not aware of the service. How you want to reach more farmers? You mentioned one trip, to send staff to the field, but what else is the plan for the future to get more farmers? #00:50:19-9#

Mr. Rawat Sangchuay: In our mission we did not choose only dtac user. When we come or when we go to one of the local community, we don't choose: You are dtac, you are AIS, you are True Move. We promote everyone in that community to connect, to

access internet, the world, a global world. But the finally we say to the farmer that don't forgot to use our application. Would you please apply our SMS-service, it is very good for you. It is better. It is ... it can help you to improve your process or something like that. can you ... your quality of live is better, better, better and higher, higher, higher in [...] #00:51:39-2#

Mr. Jan Libera: So when .. When I understand it right, you go the villages and provide training to all the farmers, teach them how to use smartphones and the internet and then you, you don't distinguish between AIS, True Move and dtac, you give it to all the farmers and then you also explain the SMS-service and the Farmer Info. But if the farmer wants to use it, he has to subscribe with dtac. #00:52:08-2#

Mr. Rawat Sangchuay: Yes. #00:52:08-2#

Mr. Jan Libera: Ok. #00:52:09-0#

Mr. Rawat Sangchuay: The most amount of user is not our goal. Is not our goal. Our goal is can help the farmer to upper their quality of life, of income, of ... dtac, ah no, AIS or True Move user can use our data for free by the information on website. We suggest to many people. You can use, you can use for free, but if ... #00:52:51-8#

Mr. Jan Libera: You want the mobile application ... #00:52:51-5#

Mr. Rawat Sangchuay: Dtac user is more channel you can access our data by SMS or application. #00:52:58-0#

Mr. Jan Libera: Mhm, ok. And, I know there is no plan to cooperate with True Move or AIS, but do you have any other plans in the future? Right now, as you mentioned before, it's the Farmer Bank and the Ministry, but do you want to expand to other ... #00:53:16-2#

Mr. Rawat Sangchuay: Partner? #00:53:17-3#

Mr. Jan Libera: Partner like, I don't know, FAO, NECTEC, there are many many organisation working with agriculture or applications. #00:53:25-8#

Mr. Rawat Sangchuay: Ah, this year, we will sign the MoU with the Department of Agricultural Support. In Thai we say [Thai words and explanation] Department of Agricultural Supporting to choose more and more guru or the leader, but, you know, 10 years ago, we had to walk to the local community. Who is the local leader, farmer, guru? You, you, you. Collect, collect, collect. Choose, choose, choose. Collect, collect, collect. This is blend, is blend. Everyone was collect in our data already. Where is guru, where is more and more, but Department of Agricultural Supporting, they have one interesting project. It is Smart Farmer. Smart Farmer and Young Smart Farmer. Is very interesting, because in a former time, former year, last year or ten years ago, we thought guru or leader or farmer is the old man. The old man, 60 years people or 70 years people, but now is wow, because we have a Smart Farmer with 20 years or teenage. Agriculture or farmer is very interesting, we have a new method, new idea, new process. Is very very very interesting, but we can collect our data, their idea[...] to our website. #00:55:44-0#

Mr. Jan Libera: The Smart Farmer I also came across in FAO, the Food and Agricultural Organization, and also NECTEC. You heard about NECTEC? #00:55:55-0#

Mr. Rawat Sangchuay: Yes, yes, yes. #00:55:56-4#

Mr. Jan Libera: They also have the Smart Farmer. #00:55:59-1#

Mr. Rawat Sangchuay: Application. #00:56:00-1#

Mr. Jan Libera: Yeah, also for rice farmers they have application. So you, but you didn't work with NECTEC? #00:56:08-0#

Mr. Rawat Sangchuay: Ah, maybe next time, because now we have more and more data. Jan, you know, we have more and more data and we have many function in our

application. According, my word for the farmer is very more and more, more and more function. Less please, less, less, less for farmer. But for you and me we have to collect more and more data. Is better more, is better. More more, much much much, is better, but for the farmer it doesn't that. Just only important function for them, weather [...], selling price or news, agricultural news. Something like that is enough for them, but NECTEC or FAO is good. But they have different service. #00:57:15-1#

Mr. Jan Libera: And, because you mentioned Smart Farmer, when I looked on the internet, there is a policy framework of Thailand 2020. You have heard of it? Also supporting Smart Thailand, I think there is also Smart Farmers. Does it mean you get more funding or more resources, maybe also from the government? Do you get more support? #00:57:38-8#

Mr. Rawat Sangchuay: Yes. #00:57:48-9#

Mr. Jan Libera: And can you maybe just write down some names which maybe are contact persons? Because we talked before about in-depth interviews. #00:57:58-2#

Mr. Rawat Sangchuay: Next time? #00:57:59-7#

Mr. Jan Libera: Next time or we can also do this by mail. #00:58:02-9#

Mr. Rawat Sangchuay: That involve this project. Yes, yes, yes. #00:58:07-3#

Mr. Jan Libera: Maybe we can do this by mail. That you just tell me who is doing what in the project. #00:58:12-1#

Mr. Rawat Sangchuay: Secretary of foundation, CEO assistant of Rak Ban Kerd Company, CEO assistant of Rak Ban Kerd Company and some of officer in Rak Ban Kerd Foundation. They can tell a more information [...] that is very helpful to you. #00:58:42-8#

Mr. Jan Libera: This would be interesting for me. Because you give a lot of information already, but to see whole picture and get more information I maybe have to ask a few more people. #00:58:53-5#

Mr. Rawat Sangchuay: Yeah, yes, yes ,yes. You can do it. #00:58:54-8#

Mr. Jan Libera: Ok. And you mentioned also that you have in-depth interviews with the farmers. Do you record these interviews or do you write the interviews down? The in-depth interview with the farmer. You mentioned before that you have it ... #00:59:15-4#

Mr. Rawat Sangchuay: Success case? #00:59:16-1#

Mr. Jan Libera: No, also when, maybe farmer is, cannot use the smartphone, because he says it is too difficult. #00:59:23-4#

Mr. Rawat Sangchuay: Oh. #00:59:24-0#

Mr. Jan Libera: Do you also have ... #00:59:24-5#

Mr. Rawat Sangchuay: From that cannot use smartphone, we have one research, one study and I will send you about ... #00:59:35-3#

Mr. Jan Libera: Ok. Perfect. Thank you. [Interruption] Maybe one last question, because it is already late and I don't want to bother you anymore. You mentioned right at the beginning that the main goal or the main idea was farmers have better price access. They can compare the price. #01:00:10-7#

Mr. Rawat Sangchuay: Yes. #01:00:11-1#

Mr. Jan Libera: Did you collect data in any way to see if you've achieved this goal? Does the farmer, who is using your service getting a better price than before? Do you have research on this? #01:00:25-9#

Mr. Rawat Sangchuay: Ähm, a difference or compare about before using and after using. We will study case study in January, February, March and April. 4 month we will have about 20 people in-depth interview that I can send to you before May of 2016. #01:01:03-9#

Mr. Jan Libera: Ok, yeah, because, ... #01:01:05-3#

Mr. Rawat Sangchuay: 20 or 50, oh no, 30 people the success case and they can compare before of using and after of using. Is very very are for the better quality of life. Can show me in clearly, yes. #01:01:22-5#

Mr. Jan Libera: Yeah, because I showed you the survey before and I will edit the question a little bit and change and I would also like to cover with the survey, I will ask the farmer what they had before as income and then what they had after the survey. Because with the questionnaire ... #01:01:40-7#

Mr. Rawat Sangchuay: That sounds good, that sounds good. #01:01:42-3#

Mr. Jan Libera: I would also like to cover if the selling price or the income has changed. #01:01:46-9#

Mr. Rawat Sangchuay: Yes. #01:01:47-7#

Mr. Jan Libera: And also maybe if they use more organic or practices, something like this. So maybe the data is also useful for Rak Ban Kerd. #01:01:58-1#

Mr. Rawat Sangchuay: A very interesting issue is, the people, who use a SMS-service, they have, we can change the quality of their live in many many many case in

nationwide. More than application, because application we have launched 5 or 6 years ago. Not enough data to see a difference comparison, but the user, who use a SMS data, is very clearly, surely, for you that you can reference in you thesis already. But I will collect and send you two services. #01:02:50-8#

Mr. Jan Libera: So do you think for thesis it would be better, because the last time you told me that the SMS-service will be cancelled by the end of the year. So you recommend me more to look at the impact of the SMS-service or the application? #01:03:09-2#

Mr. Rawat Sangchuay: Ähm, application. Application is better. #01:03:13-0#

Mr. Jan Libera: Ok. So, thank you for the interview and I will, I recorded it and will evaluate it.

APPENDIX 3: Interview with Mrs. Suparatana Bencharongkul

The interview with the Chief Operating Officer (COO) Mrs. Suparatana Bencharongkul was conducted on the 29th of January 2016 at the Rak Ban Kerd main office in Bangkok at 10 AM. Mr. Rawat Sangchuay was part of this interview as my contact person in Rak Ban Kerd Foundation. The interview was based on several guiding question which were sent to Mrs. Suparatana Bencharongkul before the interview.

Mr. Jan Libera: Ok. Working. So, just for the interview maybe I say good morning and thank you for joining and giving me some information and I would like to start to ask maybe some personal questions first to get some background from you. #00:00:19-1#

Mrs. Suparatana Bencharongkul: Ok. #00:00:19-3#

Mr. Jan Libera: Maybe you can repeat your name first. #00:00:22-4#

Mrs. Suparatana Bencharongkul: Ok. So, my name is Suparatana Bencharongkul and that's in Thai and you can call me by Nina. My age is 35 this year, ups. Ok. Profession, I act on behalf of the COO here, so, Chief Operating Officer. Right. So I am the assistant. I overlook all the technical marketing issues for whole. So, beside the application, we also have a website. Yeah. Since when did I start working at Rak Ban Kerd? How detailed you want me to go? #00:01:15-9#

Mr. Jan Libera: Just maybe since how many years you are working for Rak Ban Kerd and maybe a short background what you did before, what kind of ... #00:01:25-5#

Mrs. Suparatana Bencharongkul: Ok. Very briefly, Rak Ban Kerd name started as a foundation. That was when I was 16, 15 something like that and then we did a few things with the foundation like scholarship. And I was involved very briefly as a kid because my father started the foundation. #00:01:56-9#

Mr. Jan Libera: Ok. #00:01:57-2#

Mrs. Suparatana Bencharongkul: So he was the CEO of dtac at the time. #00:02:01-3#

Mr. Jan Libera: So, may I ask: the father is Mr. Boonchai? #00:02:05-4#

Mrs. Suparatana Bencharongkul: Yes. So I have a very contrasting background I guess like between how I lived and what I was involved in and how I see my father as a role figure. And so I started working seriously for Rak Ban Kerd four years ago. #00:02:33-4#

Mr. Jan Libera: Ok. And when you started working for Rak Ban Kerd what was your background? Did you have some experience before with, of course your father did it before, build it up ... #00:02:47-6#

Mrs. Suparatana Bencharongkul: I had zero experience in terms of practice. I see what he's done and I hear all the time what he's done. I wasn't so rooted into it, I would say. Like I understand why but I wasn't, I didn't have what, with the feeling that I have now, that I am involved, I am driven. Yeah. #00:03:17-7#

Mr. Jan Libera: Ok. So now after four years you are really close to the company, really ... #00:03:24-3#

Mrs. Suparatana Bencharongkul: I feel the frustration, I have an inspiration, I have the energy. #00:03:31-2#

Mr. Jan Libera: Ok. Great. And you mentioned that you are the chief operating officer overlooking marketing issues, including website and everything. Can you list, just briefly, some daily tasks, because for me it is necessary to get a broader understanding of how the company works. #00:03:50-2#

Mrs. Suparatana Bencharongkul: Yeah. So I overlook basically everything. The website itself is, there are two type of users, so the farmer site and the people who post the product online. So we have an e-commerce base as well. The farmer who come into read the content on the agricultural and the other side is the people who come and buy the product or search for the product. So that's city people, not just Bangkok. So being in the middle of the two group I suppose, I try to minimize the conflicts, how the website should look, be designed, be practical for both side. So we have all the team here, marketing and then the creative team. The team that you are meeting here is focus on the content, the agricultural, and they are also connected to the people outside. So, that's the daily task, I mean we have meeting, we have maintaining, we have creating.
#00:05:13-7#

Mr. Jan Libera: And who are, I guess as you are the chief of operating officer the other question, who are you working with, is obvious, more or less everyone, I guess?
#00:05:26-4#

Mrs. Suparatana Bencharongkul: Yes. #00:05:26-6#

Mr. Jan Libera: Everyone in the office and I guess also close to dtac? #00:05:30-2#

Mrs. Suparatana Bencharongkul: Yes. So the dtac is, now they call themselves the sustainable, they work like the CSR team., basically. Because since the program of Rak Ban Kerd foundation was started, when my dad was a CEO of dtac. So, it has been an ongoing image that dtac want to keep going, keep doing. So it's continued, because the foundation itself is not as practical as having a company to do a certain thing. Because you want the farmer to gain, to really be open to this new world, like the new marketing world, the mobile and everything application. So we, I just arrive on the companies, like it already happened before me. So yeah, so now dtac is working closely with us.
#00:06:43-0#

Mr. Jan Libera: Ok. And you also manage the teams in the different province, so far you have, I hope I am not mistaken, 6 teams or 7 ... #00:06:55-6#

Mrs. Suparatana Bencharongkul: 7 #00:06:55-9#

Mr. Jan Libera: 7, sorry. #00:06:57-6#

Mrs. Suparatana Bencharongkul: So, technically we have an MD for that team. He has been working closely with my father since long time. Now I work with him. #00:07:14-7#

Mr. Jan Libera: Ok. Perfect. And now, you already told me about the company works, what your tasks are, another question would be: Can you draw or illustrate in a flow chart how the SMS or application, how it works from the data collection to the dissemination of the information to the farmer? And maybe including the different stakeholders who are responsible of the different tasks from the team in the province up to maybe dtac too? #00:07:54-1#

Mrs. Suparatana Bencharongkul: I guess the flow chart can be in a more like the team or the company. So the provinces responsible for collecting data, so that's six province that supposed to cover all the area of Thailand. So, they have workers and also volunteers who go and collect numbers or video clips. They are very well connect to like the government, not that, ..., the agricultural department, ... #00:08:41-5#

Mr. Jan Libera: Ok. Is it Ministry of Agriculture and Cooperation? #00:08:44-9#

Mrs. Suparatana Bencharongkul: Yes. Because it's very helpful. I mean this is beside the chart, right. You have to know the nature of Thai farmer first. They, one you know, they don't read. They like watching clips. They respect the government department very much. They don't really understand that sometime government doesn't understand business side of the whole operation. So, we appreciate the relationship and we do need them, because they are like part of our voice and also farmer listen the most to, say, the really good farmer one. How would I call? So, if one farmer become really successful, we tend to call them professor, like in Ajan. #00:09:54-7#

Mr. Rawat Sangchuay: Guru. #00:09:55-8#

Mrs. Suparatana Bencharongkul: Guru. Guru, professor, something like that. They are sort of Thai taught themselves and so we can connect to that person, we connect to all the tree down. That's just the nature of the farmers themselves. So, us, we, we collect the data, I mean, we got the data, we evaluate, we design the app, design the web, we put the data on and then we try to get feedback, as much as we can through the provinces as well. #00:10:40-4#

Mr. Jan Libera: May just interrupt. How do you normally get the feedback? #00:10:45-1#

Mrs. Suparatana Bencharongkul: Say like the telephone call for example. Like what's popular, what would they call back about during the SMS time. Or even we try to think as an entrepreneur way, kind of. If we were to run the farming business, what would a risk, what would be a valuable information to the farmers. Say, for example my dad always mention about like chillies, you know, the red chillies, the small chillies, that are plant widely in China. The minute they come into Thailand, the price of chillies in Thailand drops. Like majorly and basically no one makes money here. That kind of news would be, like you said, major to know, like on-time for the farmers here and that's what we try to send out as soon as we can get the information on the SMS or application. #00:11:56-6#

Mr. Jan Libera: And where do you get, for example this kind of information, when it's concerning trade, that for example, India is producing now a certain kind of crop which might affect the Thai market? So you also get this kind of information from the Ministry of Agriculture or from your own experience? #00:12:17-9#

Mrs. Suparatana Bencharongkul: I think both, right? And also we must, I must say that we not, the information is not widely distributed, like we won't know what is being done in China or India. So the minute we know, is already quite late. It's being forecast that it's coming in or yeah. #00:12:44-9#

Mr. Jan Libera: Do you also adapt news from general news centres, like CNN, BBC or Thai newspapers and re-write it to bring it to the farmer? #00:12:57-3#

Mrs. Suparatana Bencharongkul: Yes. Thai newspaper mostly, not the CNN, not the foreign one. #00:13:05-4#

Mr. Jan Libera: And when you designed the application and the SMS service, how did it work? Did you, because I mentioned at the beginning, that there are a lot of projects in Africa or India also has a lot, also working with videos for example. Did you connect with organizations who already had experience in this field or did you build it up from zero with your own experience? #00:13:36-9#

Mrs. Suparatana Bencharongkul: So, from own experience. But it's a, my father is the core of the thinker here and I guess the business owners personality run through. He doesn't believe like to work partnering with someone. So it's purely from inside his head and it was designed at the time to, it was grouped into the function that we offer. So, pricing, the price being offered, price fluctuation, the price that being offered so that the farmer can come through. I am sure you have come through. So, it was designed with a, to serve what we have answered, so the answer was grouped into different function. We, however, think that to grow bigger in this application. We want to group it into areas, so farmers can fill in some information, they can go directly into their areas, because actually no point the north will listen to the south, because they don't have the same soil, weather, exactly. That's the future development. And so dtac, now back to the flow, they do promoting mainly and they are the only sponsor, for this application. So, for them two things. They get the image, which they always want to emphasize on being the, you know, like being kind. And also second thing is that, if you get someone hooked on to internet, the tendency that they'll go on to other things is good. And you also increase their income, you hope to increase their income, so they have more spending on other things in live which now [...]. So, yeah, if it's successful overall it benefit all. I mean people always ask me why would you want, why would dtac want to do this or why would you want to this? But they forget that, when it's done it's just an overall thing. #00:16:38-7#

Mr. Jan Libera: Yeah, a similar question would be my next question. What are the main goals? You mentioned already for dtac it's the image and the farmer increases their income and will maybe spend more later on. What is the, normally when you implement a service, like the SMS or application, when you start this service, you have certain goals. You say you want to reach that the farmer has a better livelihood, increase their income. What was the ... #00:17:08-6#

Mrs. Suparatana Bencharongkul: Income, the goal of Rak Ban Kerd, right? #00:17:11-0#

Mr. Jan Libera: Yeah #00:17:11-3#

Mrs. Suparatana Bencharongkul: So, I guess, my father being the, what is his position now at dtac? Share man. #00:17:23-1#

Mr. Rawat Sangchuay: Share man. #00:17:23-1#

Mrs. Suparatana Bencharongkul: Yes. It's not appropriate for the share man to have an e-commerce, but it's ok for the chairman to set an outside company, totally doing something else. Because as a chairman you can't just say: Oh I want this money to go and do this business here and the board will kind of question, why would this benefit the company? But having Rak Ban Kerd Company is partly to fulfil his overall picture of dtac as well. I mean, and not to mention that if an e-commerce site can be successful within you check [...]. But that's not our aim right now, then if it was our aim, we wouldn't run it sustainably, we would be like, you know, pouring in, doing mass-marketing, but we really want to get into, to be part of the system, to be accepted among the farmers and really make them rich, as my dad would say. Like the direct word is: Make them rich and we get rich. That's like a flip way of business. #00:19:00-0#

Mr. Jan Libera: So your, for the farmer itself your goal is to get them, their income level higher. #00:19:07-1#

Mrs. Suparatana Bencharongkul: Yeah, to raise their income. #00:19:07-1#

Mrs. Suparatana Bencharongkul: So, I guess I have to get deeper into the history, because ... #00:19:22-7#

Mr. Jan Libera: I would appreciate. #00:19:24-0#

Mrs. Suparatana Bencharongkul: We did a few business in the past, for example a convenient store under Rak Ban Kerd name. And that flopped, because we don't have logistics, we don't have connection with the distributor. So, the main goal is to raise the income, so he looked into what kind of, what kind of businesses that the farmer were running, so it was convenient store, farming product, local product. And then we did a rice mill. That also was difficult, because there is a lot of big guy in the ... And then you coming from FAO, you, I meet the guy Stephan, who mentioned to me about this GI, Geographical Indication sign. Which is something that Thailand, Thailand lacks this concept of valued product, the special product that can only be planted in a certain province. We lack this concept. We, as a buyer, consumer, before I get involve in Rak Ban Kerd, I did not know that. You buy a product because of the brand, some big brand marketing it you buy because of the name, you don't select, not like Europe or not like Japan, where you select a product and you see where it come from, where it be made, the brand come later. So, that's why just doing a rice mill or having a convenient store would not work, because this country is run by big company and big brands. So, he had this website for a while, but after the birth of smartphone, he sees, I guess he sees lights, he sees the end of the tunnel that it can be done, it's possible. That you can push good product online then there's a chance of them making money, surviving in this new world, digital world. #00:22:10-6#

Mr. Jan Libera: You mentioned several times the website and I have been to the website and ... #00:22:25-0#

Mrs. Suparatana Bencharongkul: It's in Thai #00:22:26-3#

Mr. Jan Libera: Yeah, but thanks to the big company Google, you can translate it into German or English which is not the best translation, but at least it's understandable. And I saw that you have the e-commerce and I was wondering now, how many visitors do you have, let's say, per month on the website? #00:22:50-0#

Mrs. Suparatana Bencharongkul: Actually, quite a lot for a boring website. I think 400,000 per month [conversation in Thai]. We will get the exact number. #00:23:09-9#

Mr. Jan Libera: Yeah, estimation is fine. #00:23:12-0#

Mrs. Suparatana Bencharongkul: Well, an estimation. But it's per month. The bad thing is, the bounce rate is high, because the website is not designed to solve that problem. So, we only have one good programmer here. Two kind of intern, well not, two people who have the ability to learn from the programmer and that's it. And so things develop quite slowly. [Thai conversation]. Nice. More than nice. 600. But, because of the way it's drawn, like for example the bounce rate come from the fact that you come into one page and then you leave the website. Not necessary that that page bore you, but it doesn't have what attracts you to go further. So, I didn't know that. I am not from an IT background, so now we are trying to solve that, but will take another year also to create that kind of function to link and everything. So, the website was created like a book. It shouldn't have been, you know. So, one page by one page kind of thing. It should have been linked and it should have been, the benefit of having a website wasn't applied on to. So, that's why the bounce rate is high. So, this year the plan is to do something with that. We hope to separate the e-commerce on to another side also, to minimize the, well not minimize, to separate the user intention, you know. When they come into read and when they come into buy. It's different mood, different time that they allow so. So, separating that will also decrease the bounce rate. So, usage is a lot. I am sure you want to know about the e-commerce. #00:25:40-3#

Mr. Jan Libera: You, yeah, completely got it. #00:25:44-2#

Mrs. Suparatana Bencharongkul: Ok. I must say last year was quite shock to us. It was so quiet for so long, you know. It was like we are working in the middle of the mountain alone or something. We never hear from anyone and then we were done with the e-commerce about two years ago, a year and a half ago. And then it was quiet and then suddenly last year there were just transaction, every week, which, you know, in term of percentage is 600 , 700 percentage. But in term of income it's peanuts, zero. Because what you can see from the product they are selling and we are not trying to gain profit from it, because there is no point. Any, you price the price higher, you make price the price higher, no one is gone buy. And you can get it anywhere, when, you know, in Thailand 7-11's every corner is ridiculous. So, yeah, so, that's hindrance, but it's act, it's happening. #00:27:07-1#

Mr. Jan Libera: Ok, I would like to dig a bit deeper into the e-commerce. [Interrupted] #00:27:12-1#

Mrs. Suparatana Bencharongkul: Stats. #00:27:15-8#

Mr. Jan Libera: Ah, ok. Stats are always interesting. [Thai conversation] #00:27:26-4#

Mrs. Suparatana Bencharongkul: Session, user. Oh, per month, that's a year. [Thai conversation]. We would sell the website. #00:27:43-9#

Mr. Jan Libera: Digging deeper in the e-commerce, what is, you have a lot of different kind of e-commerce, I am not sure how familiar with the e-commerce in Europe you are, but you have for example eBay, Amazon, different kind of designs. Like a company selling their own product ... #00:28:02-6#

Mrs. Suparatana Bencharongkul: Understand. #00:28:02-8#

Mr. Jan Libera: Or users selling their product. So far, as I understand, Rak Ban Kerd is more the platform like Amazon or eBay, so farmers can put their products online and consumers ... #00:28:14-5#

Mrs. Suparatana Bencharongkul: To be exact, I was telling my dad, that we are like Amazon. Why, because we have our own product. To start with, we have the rice, the organic rice, which we want to set it up as an example to push the organic product overall, right. Second we have an online, I guess I can claim it the only true online platform for local products. There are so many other websites run by the government or half-government et cetera, you can go in, it's just, this is not true online, it's just not truly online. It's just information, it's like an advertising page. We also have I guess an advertising page, which we call direct market, but what we make sure of this that's not just a dead advertising page, is that we make them pay like a 1 Baht fee for putting their product on. At least they feel that this is like a shop. On the online side, obviously there is transaction fee to contact to the Pay Sabai, did they, dtac mention? #00:29:51-8#

Mr. Jan Libera: No. #00:29:52-6#

Mrs. Suparatana Bencharongkul: Ok. So, Pay Sabai is like a PayPal. So, in Thailand only a certain company, they have to get the licence from the government to act as a bank, online banking. So, as a company, Rak Ban Kerd did not apply for that, you cannot keep money for others. #00:30:20-4#

Mr. Jan Libera: So you use the PayPal system similar. #00:30:23-6#

Mrs. Suparatana Bencharongkul: Pay Sabai. #00:30:23-7#

Mr. Jan Libera: And, you compare your website with Amazon, so how is the logistic working for the website itself. Because Amazon, I know, they have huge stores where the people can send their products and they will distribute. Is it the same for Rak Ban Kerd or does it work differently? #00:30:45-0#

Mrs. Suparatana Bencharongkul: Because we only have our own product, it's the rice, we get it deliver here, we have storage here, and right now the orders are very small, so we can distribute it our self through the post. We have spoken to the post office before, if our order get larger they can pick it up from here. #00:31:11-7#

Mr. Jan Libera: Ok. #00:31:13-2#

Mrs. Suparatana Bencharongkul: But organic rice is not being accepted widely.
#00:31:18-8#

Mr. Jan Libera: I guess this will change. #00:31:21-1#

Mrs. Suparatana Bencharongkul: Yeah, I mean a thing like GI, the geographical indication, if it happen it would be good for Thailand, because we have very good soil, water, everything. We should not mass our product, we should make it specialize in every area then we would be a developed country, if it's done that way. #00:31:49-2#

Mr. Jan Libera: I agree. And, my next question would concern the future plans of, in this case all, starting from the website, SMS to application. Maybe short term future plan but also the long term. #00:32:07-2#

Mrs. Suparatana Bencharongkul: The short term, I guess is there, like separating the two, make it very user friendly. Long term, I like the main website to, I guess this is my now kind of vision. If you think about National Geographic channel, travel and living channel, I like the website to have that view of a local guide person. To be an information like farming information, agricultural information, to information of the local area, the attraction. And for it to sabai. If it's being popular like that I am sure we would get a lot of advertising and we can collect all sorts of data and research from the back office. Yeah, that's, I think if it can get there. And I think no one is really doing that. You know, you can say there is TripAdvisor, but they are mainly for the hotel or tickets. But this is to represent Thailand as a local guide and not really hoping to gain anything from you, just a friendly person to go to. #00:33:49-9#

Mr. Jan Libera: I saw that you already promote this in the website. That you already put some place where to go, recommendations. #00:33:59-3#

Mrs. Suparatana Bencharongkul: But next year, I, well this year the team already come up with a lot of great idea, whereby it's less informative but it's more interesting to read, more alive. Instead of having just facts, stories. #00:34:22-9#

Mr. Jan Libera: I agree. But this would mean, because, I mentioned before that when I went to the website I need Google Translator to have a look on it, so #00:34:31-7#

Mrs. Suparatana Bencharongkul: English will be done. Say like, not so much on the agricultural information, because, say like, what's good for what area, foreigner doesn't really need to understand. But say, the story of why things happen where, sure, like a certain culture, a certain attraction, that will be our focus, if we were to translate. #00:35:07-4#

Mr. Jan Libera: And, ... #00:35:08-8#

Mrs. Suparatana Bencharongkul: The e-commerce side. So we're hoping to, English is important, I mean it will definitely raise the income. Another thing, we don't know really how to get pass all the licencing. I mean, acting as a middle person is like a big brother to someone, right. So, when you bring some to this little brother and then say, hey you, he is interested in your product. But then he said like I don't have the licence or things like that. That's our biggest hindrance. We don't have enough resource to help all of them, but how we do we justify helping one or two, right, And how do we, how do we say like oh we cannot take the offer for this person, we can only take the offer for this person. So, I was hoping to solve it by just having, what you say, a room, a room inside the website, where is ... #00:36:34-7#

Mr. Jan Libera: Like an auction? #00:36:35-4#

Mrs. Suparatana Bencharongkul: Well ... #00:36:36-2#

Mr. Jan Libera: Or a forum? #00:36:39-1#

Mrs. Suparatana Bencharongkul: A header, which is everything else is in Thai, this header is in English. So, that one room I will only collect the product that is ready to export. That's the plan. For example, if this GI thing goes through, I would love to have the GI in one room, what I meant is the product that have the GI certificate in one room. And start with that. Start with something small, something that we already know that the big hindrance is off and help them. Because at the end of the day a website is just another front. #00:37:29-1#

Mr. Jan Libera: I agree. But when you talk about the e-commerce, it sounds like you also want to expand your product range, now you only sell organic rice, so you want to? #00:37:42-9#

Mrs. Suparatana Bencharongkul: I am not sure I want to actually. Because it's a good thing we have it. Where we go, whoever we meet, I tend to give the rice to them. It's a, it represents us or how we want our people inside the website to go towards. But being a website .. If we were to go into that area we would be Alibaba kind of thing, right? We, I don't think we want to go there like having a hub or, because then you, then you grow so big that you forget why you are here, how you develop. I mean there is a lot more work just having to serve the people inside, right? How to facilitate, how to design the system behind not just the front, to benefit the people, the user. I think for the next maybe five years at least, the team would like to focus on that. #00:38:59-2#

Mr. Jan Libera: And, we talked quite a lot about the website now. Coming back to the ... #00:39:07-2#

Mrs. Suparatana Bencharongkul: Application #00:39:07-7#

Mr. Jan Libera: Application, which is the main part of my research. What are the short term plans and the long term plans for the application? #00:39:17-6#

Mrs. Suparatana Bencharongkul: The short term plan is to, like I said, divide the user into areas. So, in order to do that we need to collect more data. Because you can go into

certain provinces and then it, there is not enough information for them. So, this is like kind of short, but long term. Because it's done that easily, it takes, it's going to take another two, three years also to add more information onto the area that we are still lacking. And then once it's divided into areas it will be more beneficial, user friendly. It will also attract more user, I am not sure you got the figure of the user number?
#00:40:13-5#

Mr. Jan Libera: I think you provided me and it's around 90 000, 80, 90, 100.
#00:40:19-0#

Mrs. Suparatana Bencharongkul: And the usage is 60%. So, is good for again, boring application. So, apart from that, do we have more future plan? I mean the usual app development, you know, like notification, local, what do you call it? When it detects?
#00:40:50-4#

Mr. Jan Libera: The GPS? #00:40:51-9#

Mrs. Suparatana Bencharongkul: Yeah something. Location based. #00:40:57-0#

Mr. Rawat Sangchuay: Searching by location. #00:40:57-2#

Mrs. Suparatana Bencharongkul: So, which, that is what we aim to do. So, a lot of user friendly function. #00:41:14-6#

Mr. Jan Libera: Ok. And, do you also want to work on the content? Provide more content or combine the content, because I checked before, what you don't provide is for example weather tailored for the farmer, like especially for farmer the weather ...
#00:41:34-2#

Mrs. Suparatana Bencharongkul: Broader... #00:41:35-1#

Mr. Jan Libera: Broader, more information which are more suitable for the farmer?
#00:41:38-9#

Mrs. Suparatana Bencharongkul: Yeah. To be direct we have not thought about broadening the information in terms of variety, because we still have a lot of information to fill up on other areas in what we have. But, sure, but we also have to be very careful about application. How it should be simple and not too broad. For example the name of the application, we may change, because it's not just for really farmer kind of person, right? So, that's a next challenge as well, what would it be named and if it was named in Thai would I have gotten to know you, maybe not? #00:42:46-1#

Mr. Jan Libera: Sure, maybe not. #00:42:47-6#

Mrs. Suparatana Bencharongkul: So We were hoping to name in Thai, I think beginning of the year and while I am sitting with you, I am thinking, ok, so, if I hadn't gotten to know you, I wouldn't have the research, I wouldn't know that there is some guy, who be interested, not from Thailand, to do something like this. So should it be named in two languages? Now, yeah, but, so, no, not, not. I grew up in a telecom, that's another side of me. So, we have knowledge about, some knowledge about website, application, servers, what to do and not to do. Application is not to make it too broad then once it's too wide then it became a website. Then you would lose the benefit of having an application like this. In fact, I'll try to simplify it more. You know, I was doubtful having the e-commerce on it even. Because you go to application for something and you don't want to go through a lot of things, because it's supposed to serve you something easy and then you come out. #00:44:23-4#

Mr. Jan Libera: I agree. Simpler is sometimes better. Ok, the last part of my interview would be about your opinion on a few questions, your personal opinion. The first one we skipped already, what are the main goals, we talked about this already, and what the app should or how the app should impact the farmer. For example question 4c, what else do you think is necessary to improve the situation of the farmer? When you have the application, which supports the farmer in comparing the prices and markets, which

might raise their income, but agriculture is facing a lot of challenges, you mentioned use of chemicals. #00:45:16-9#

Mrs. Suparatana Bencharongkul: So, GI, for example is something that can really benefit the farmers, but they or themselves face challenges from what I gather from the talk, which is what I already mentioned, because the farmer respect the government, they believe in the drive that the government make. But the government aim for big, big figures, because they in short term, four years if they make it. Two if they ... So, when we, when they aim for figures in short term it's mass, so it's not, it's totally against what GI is trying to do. We also meet up with the ... let me google ... #00:46:16-7#

Mr. Rawat Sangchuay: Department of Agricultural Promotion #00:46:20-3#

Mrs. Suparatana Bencharongkul: Department of ... yeah, so, we try to work with them and they also, I guess after many many years they agree with us, well and they don't agree with us, they have the same ... #00:46:52-6#

Mr. Jan Libera: Vision, opinion. #00:46:54-7#

Mrs. Suparatana Bencharongkul: Vision, yeah, Department of Agricultural Extension. So, they're private, oh no, they're not, they're not private company, but they are ... you can look up. #00:47:11-8#

Mr. Jan Libera: Yeah, I will search. #00:47:13-0#

Mrs. Suparatana Bencharongkul: It's confusing. So, doesn't matter how many government chairman change come and go, they are there. So throughout the year they are there, so, they face what we face, the governments' scheme change, then different politician come, push different things and then they are in the middle. So, we work closely with them, because they also, they are rooted into different provinces and they have a lot of farmers guru in hand. The farmer guru is so important, because they are the inspiration of the people around. This is necessary because this is like a, so the GI, the

Agricultural Extension Department, I like, I like the same time, you know, we are on the same front. So we can work together more. It's something that will help the farmers. That should be done more. That should be, someone should encourage us or even Thai [...] somehow, but the problem is that, even though we are the only private company mention that, because we run it like sustainable way as well. So we have like three force with little money. So, I guess we need, I need, we need big firms, like say dtac, but they are not really agricultural related. They do it for us, I already mentioned before. But we need other firm, who sell agricultural product, to start seeing the value of the product as is, not massing it, not making it cheap, not to ... so that the price isn't get cut, cut, cut, cut, cut down to, you know, to the bottom, which is where the farmer stands. Which is what the GI is trying to do, mean, they're trying to reach out to foreign company, not here, they have some company here, but getting the product outside and then getting it recognised outside first, then coming it back in. #00:50:12-2#

Mr. Jan Libera: So the approach you are following is a little bit than the Royal Project? #00:50:17-3#

Mrs. Suparatana Bencharongkul: The Royal Project I ... #00:50:19-8#

Mr. Jan Libera: They also established an own brand which is recognised, I don't know, at least in Chiang Mai you see that the shops are highly frequented. #00:50:28-2#

Mrs. Suparatana Bencharongkul: I like the Royal Project, I don't like the fact that they make it too easy for the farmer. #00:50:36-8#

Mr. Jan Libera: So you would like to? #00:50:38-9#

Mrs. Suparatana Bencharongkul: I like the farmer start thinking like a business person, not, I am trying to find a softer word. #00:50:50-7#

Mr. Jan Libera: No, I think, I get the idea behind, so. #00:50:54-5#

Mrs. Suparatana Bencharongkul: So, because otherwise without the project, I mean, it's so unstable. Who is going to run it after the princess, and then when, you know? And the system behind every single Royal Project is wow. Like wow. Like very Asian, very Southeast Asian, not Asian, very Southeast Asian. Southeast Asian have this easy going way of live, Thailand and Laos and Indonesia, not Malaysia, not Birma, they have a different style. Not Cambodia. Mean, places that were communist kind of style, they will have a different way. But our way is like this easy going way, simple help people, that's not going to work in long term, not when AEC and thing. So, Royal Project is good but it doesn't create a good habitat. #00:52:09-2#

Mr. Jan Libera: Ok, so you would like that the approach is coming more from the farmer? You want to encourage the farmer, give him incentives that he is pushing forward his production to sell it, to get the GI for example? #00:52:23-1#

Mrs. Suparatana Bencharongkul: There is one thing we always say when we select the people who come and post our product, they got to have the drive first to want to sell more. A lot of people don't want to sell more here. They are happy as is. Is strange. We approach so many OTOP product, which are bestseller and then they say like we can't produce more. It's not a matter of can, it's how you plan, right? So, but they don't want to plan, they are happy as this. Sabai sabai we would say. So, one thing I would like to do more is to group together with the same forces. Another thing I would like to do more is to change the perception of this sabai sabai culture. I don't know how yet, but we are trying in every small way. #00:53:32-9#

Mr. Jan Libera: And, the question, we talked about this I know, about long term. But saying you will, we will meet in 10 years from now, where do you see the Rak Ban Kerd Foundation? What is the market position or how is the app? You reach 10 million farmers for example? A vision how you see this project in 10 years. #00:54:00-4#

Mrs. Suparatana Bencharongkul: My dad written there, Thailand in a nutshell. So, they main website, the content, I just, like a hub for knowledge and culture of Thailand. That's for the time of Thailand, not like a messy website that Thai people sometimes

like to go in talks about television show et cetera, but something like that. Something respectable but friendly. Thailand in a nutshell. But the e-commerce site, I hope it will be a drive to, so, that people don't lose their businesses around Thailand to big companies. Because, I guess, when a country by only a few companies it's very fragile. So, how would you? So, I was hoping this will be just a small force at least to maintain the business for the local people. That's a huge long term. #00:55:38-7#

Mr. Jan Libera: Yeah, this was just a vision of where you would like to see the company in 10 years. #00:55:43-6#

Mrs. Suparatana Bencharongkul: I mean if I can succeed that, I am sure that the company will be very successful. #00:55:49-0#

Mr. Jan Libera: I wish you all the best for this. And, just three more questions. Your opinion about, we talked also about the government before, that you think that it's a huge problem that it's always short term. I think that's the same in Germany too, politicians always think about the next election. How happy are you with the support of the government in the case of agriculture, but also communication? One example I want to mention is the last government imposed a strategic framework called Smart Thailand 2020, promoting ICT, promoting infrastructure. I just saw the document, I think 2011 they implemented the plan to bring Thailand to the next technological level. How do you see the government support right now, your company gets but also on pushing Thailand forward in ICT and agriculture? #00:56:50-9#

Mrs. Suparatana Bencharongkul: I don't, I did not feel the support. I think the government, sometimes even if you get a business-minded government, it's not enough because the government shouldn't create something against what a private company is doing. A government should concentrate on the foundation of it all, not trying to get into the private sector. But rather support the private sector. For example we met a lot of agricultural department government figure and then they want to create a website and they want the private sector to support the investment for that website, but they forget to see that once their time is done who else is going to run that website. So, for my views,

they are the people who can reach everybody. So if they can reach everybody for the private sector then we're all happy. I mean, even, what would you call it, the half-government party such as like the post office, if the government can better that in some way and, they should be focusing on logistics, the system. Building roads, I mean, everyone talk about it, every business person talk about Thailand being a hub of Southeast Asia, because we're right in the middle, we're connected to the sea and bla bla, we have big river. No one's doing, no one's building the [...]. I would like to see the government do that and that would support everyone, any business, be it fishing, you know, farming, yeah. #00:59:16-9#

Mr. Jan Libera: So, pushing forward the development of the country? Investing in infrastructure in any way? #00:59:22-3#

Mrs. Suparatana Bencharongkul: Infrastructure, infrastructure in any way. Even for telecom for example, why bid so high and then the company go into such big debts. Instead of trying to compete with the private sector on the businesses when they are in their short term anyway? #00:59:42-6#

Mr. Jan Libera: Ok. And, one more question, we also talked about it before a little bit, but your opinion, especially looking now at the vision you gave before, how happy or how satisfied are you with the current situation of this project? About the state of the application, the SMS-service, how it is going and the website. How happy are you or would you, when you started the job, would you liked to have achieved more to this point? #01:00:19-8#

Mrs. Suparatana Bencharongkul: I would say, I am happier then when I started the job and thank you to smartphone. And my team has been very good to me, been very, we all've been very patient with the slow development of our project. And I am happier because it picked up last year and we see hope. I am not totally happy because of the past that we are going. And some difficulty, I mention, when it comes in the time when, even if we have an offer to, an interest into some product that's on the website, we can't

connect. So, our job is to connect, so, when we cannot connect it's frustrating in that sense. So, if we can get over that hindrance then it would be good. #01:01:34-2#

Mr. Jan Libera: Ok. And, the last question is concerning my research. How useful you think evaluation of the application would be for your company? Especially if the evaluation, we don't know the results yet, so we will see if there is a significant impact or no significant impact. How useful do you think this evaluation will be for the further development? #01:02:03-8#

Mrs. Suparatana Bencharongkul: I think application with such function will have its lifespan actually. To be honest, once you, if I put myself into a farmers' shoes, it will be beneficial from the start to the mid time of, maybe their success. Because that would mean that they've already gotten used to this kind of knowledge and know-how, how to use this phone, application. And then there's some many other application that can benefit them in so many other way. Things like just Google, you know, going to Google and searching for other way to help, to learn, then I will not say that we will be able to be Google, you know. That's not possible and, so, it will have life, but then it will always have a newbies who come into use it. And by then I think we will come up with something else. #01:03:31-8#

Mr. Jan Libera: So, you, for you the application is like a teaching tool for the farmer. #01:03:39-8#

Mrs. Suparatana Bencharongkul: Yes, for dtac as well. I mean that's what they want the farmers to get hooked on because you need a tool, you can't just go in with a free phone with no tools, doesn't mean anything. So, it is a teaching tool and helping tool. What I am saying is, once they got that knowledge and once they got that, once they know how, I am sure they will move on to something else. #01:04:09-9#

Mr. Jan Libera: And, I agree with you that there are lot of other, like YouTube can provide also a lot of other videos, but what the application makes special is that you

provide the price. Do you think the farmer will also find other ways to get prices like in this quantity? #01:04:33-0#

Mrs. Suparatana Bencharongkul: There are other way that provide price right now from the government sector, but what we, our selling point is that we go and collect this prices our self. We as the people in the provinces, every morning they would collect this prices be through, telling it through a phone call, but that's their job and it's our job in the centre here to monitor that, that it's happen. So in some way that's, we certify that the information is really true. #01:05:24-6#

Mr. Jan Libera: Ok. And, you think, when I will conduct this research, you, in your opinion there will be an increase in the farmers' income as a results or you think the application is maybe still, it's too young, the farmer, there is no impact seen? Or what is, what do you expect from ...? #01:05:50-8#

Mrs. Suparatana Bencharongkul: There is actually a story, true story from the dtac side. They have a group of people going out onto teaching the internet, because they this Internet for All program. There was a person, who bought, sell grilled chicken, grilled chicken in Pattaya or the outside of Pattaya and this lady was approached by dtac team to teach about use mobile, use, smartphone usage. She learn about the application then she saw the price of the fresh chicken meat and then she realized that she was fooled all this year and she was sold expansive chicken meat by this company in the area. And turns out that this sell person was taking in the money into her or his own pocket. So the company fired the person and then she got cheaper cost. So, it's maybe little but this little story happening around, which bring to help, yeah. #01:07:16-0#

Mr. Jan Libera: Ok. That's all I have. Thank you very much for your time and answering the questions that honestly and in-deep. Thank you very much. #01:07:29-0#

Mrs. Suparatana Bencharongkul: I am very happy to meet you.

APPENDIX 4: Interview with Khun Praphan

This interview was conducted at the headquarter of the mobile phone provider dtac in Bangkok. Guiding questions were provided to the two participants Khun Praphan and Suwanna Onsuwan (Nim). Both participants work with in the Smart Farmer CSR Project. #00:00:00-0#

Mr. Jan Libera: I think it is easier that we follow the questions and have a bit of an open talk. The questions are like guiding questions, if you want to add more, I am pleased to hear more or maybe if I have a question different to this one I would like to ask a little bit more. So maybe first ... #00:00:25-7#

Khun Praphan: My name is Praphan and I am the head of CSR dtac. #00:00:30-3#

Suwanna Onsuwan: My name is Nim. I am working for the project manager for Smart Farmer project. #00:00:39-5#

Khun Praphan: She joined us last year. #00:00:41-8#

Mr. Jan Libera: First of all I would like to thank you for meeting me today on short notice and thank you taking part in this small in-depth interview. And first question about your backgrounds maybe. I would, briefly maybe what is your background in communication or also if you have experience with agriculture. And then maybe describe your positions, what are you working on, what are your projects, what are your daily tasks? #00:01:10-5#

Khun Praphan: Ok. Let me start this. You know, our strong commitment to the Thai society is to empower the society by bringing the benefit of the mobile to as many people as possible. And the agriculture is a major segment in Thailand. As you may know that, we have, the agricultural segment is quite large with the, maybe around 5.9 million household. This is a approximately 18 million agriculturists in Thailand. And there average income is quite low, you know, around 159 000 Baht per year per household. This is the amount before deducting the expenses. So the might get left

around 8, 9 000 Baht per year. That's why they have a lot of loan, debit. As you know, in Thailand, the poor people, the poor farmers, they always have debt and loan either from the agricultural bank or illegal loaner. We see this as the major problem in Thailand and dtac as the mobile operator, what can we do to help them? So we start the project since, as you already know, we start the project since 2008. We partnership with Rak Ban Kerd Foundation. First what we did, at that time, you know, there is no smartphone yet, so we use the best technology which is SMS to provide farmer with the information, the information that benefit them, is good to them. And we are, we sponsor Rak Ban Kerd Foundation to organize the call centre in nationwide, that the farmer can call in for more information, because they cannot access any internet or any, you know, they have lack of knowledge in an equipment to access information. And since then we have around 250 000 subscriber for the SMS. Then we developed this farmer information via SMS into the FARMER INFO application to give them more and specific and in-depth of the information like agricultural prices, tip and technic, you know, to develop and growth their ... #00:04:35-5#

Suwanna Onsuwan: Knowledge. #00:04:35-8#

Khun Praphan: ... farming knowledge. For example how to do the fertilizer by themselves not chemical one. And this is the knowledge sharing from farmer themselves that they successful in doing the farmer. Which is all Rak Ban Kerd Foundation's responsibility to do that. And in 2015 we thought that this is not enough, we cannot do mass to all the farmer, because they have so many segment within the agriculture segment and the education is very different. If we do mass we won't get anything impact, positive impact back, really not. So we start to develop our project, we call it Smart Farmer project. What we do is that we, and we also sign the MoU with the Ministry of Agriculture. And we focus on young farmer, because you know the traditional farmer maybe, as you may be aware of after talking to many farmer, they believe in traditional style, they will not change, the way they do farming is, you know, transferred from their parents, grandparents and they like to use chemical. It is easy to do it, but it costs and use a lot of, they have a lot of debt because they have to buy chemical and all that. So the Smart Farmer project that we collaborate with the Ministry

of Agriculture, we focus on young farmer and our ambition is to turn them into smart farmers. #00:06:48-1#

Suwanna Onsuwan: Young farmer is farmer who is about 17 to 45. #00:06:53-0#

Mr. Jan Libera: Ok. #00:06:54-3#

Khun Praphan: 17 to ... #00:07:00-6#

Suwanna Onsuwan: 17 to 45, not over 45. #00:07:03-8#

Khun Praphan: And this young farmers have been selected by the ... #00:07:11-8#

Suwanna Onsuwan: Ministry of Agriculture #00:07:13-8#

Khun Praphan: ... Department of Agricultural Extension. How many there are in Thailand? Around 70 000 of them? #00:07:19-8#

Suwanna Onsuwan: Yes. #00:07:19-8#

Khun Praphan: But this year we target 7 000, which is they are the leader and they of course can share their knowledge to their communities. The young farmers, most of them, we do a small survey, they already have an interest in doing the non-chemical farming. And they are interested in the farm management, you know, using the innovation way. Their age, she already said, is younger than the traditional farmer. Traditional farmers, you know, they rely on heavy chemicals on farming. And for the financial the young farmer is more generally more financial independent. But, like I said from the beginning, the traditional farmer, has a lot of loan with the bank of agriculture or illegal loaner. And the internet usage is quite different. The young farmer, most of them have already entered the internet, but, you know, basic one, not in-depth. And the majority of the traditional farmers,, they are mostly non-internet user. The [...] proposition is that the internet is for the young farmers, the internet is like a wealth of knowledge that can help them, you know, improve their profits, their farm management

and can provide them directly access to the consumer. And will them support operational efficiency. Because this is what we did the survey and they have potential. And also we have workshops with the young farmers themselves, the one that success. What they want to know is about farm management, agriculture innovation as well as the online marketing. This is their requirement. They are willing to go to the next step. #00:09:52-0#

Mr. Jan Libera: May I shortly also ask, when you did the survey did it also cover the educational background? #00:09:58-8#

Khun Praphan: No, no, no. We only did the small survey. #00:10:00-8#

Mr. Jan Libera: So you are not aware of, if the ..? #00:10:02-3#

Khun Praphan: But young farmer mostly graduate. The highest is from the university, the lowest is technical college, diploma. #00:10:17-9#

Mr. Jan Libera: And, just one question. Is it possible that you can provide me with the small survey data or is it ...? #00:10:30-1#

Khun Praphan: Yeah, yeah, yeah, maybe, but rough one, you know. Not official. #00:10:38-7#

Mr. Jan Libera: No, no, just maybe the results about the needs of the farmers. #00:10:42-6#

Khun Praphan: We can do that, we will send to you by email. #00:10:44-8#

Mr. Jan Libera: This would be a very interesting part of my thesis. #00:10:47-3#

Khun Praphan: So when we got this information we decided to focus on the young farmer, so that we can see the difference after we have trained them. We haven't started

yet, we will start this May to train them. We will do the survey before and after the training. So we came up with the curriculum, we came up with the strategy that we want to build the, initiate the smart farmer mobile learning centre. Mobile learning centre means that it is not the fixed location. We will go to them, we will not bring them to us, because this farmer have to work every day. If they stop one day work that means they lose a lot of money for themselves, because the live [...]. So we imitate this mobile learning centre with the Ministry of Agriculture and also we came up with the farming curriculum that we are going to teach them. The core concept is the farming management. We have like, I could send you this as well. The training contents of the smart farming is the, the first one is the problem analysis and thinking process. We thought that they have quite difficulty in solving the problem and their thinking process. And the second one is the farming financial management. We found out that most of them do not have the formal accounting system, nothing. They don't know what is their really expense and cost. That's why by the end of the day they will not have any profit left. So this is quite important for them and a lot of young farmer like to learn about this. #00:13:04-0#

Mr. Jan Libera: May I ask a question? Because nowadays there is also a lot of electronic money, electronic transaction ... #00:13:11-7#

Khun Praphan: I will come to that. #00:13:12-8#

Mr. Jan Libera: Ah ok. Sorry. #00:13:13-8#

Khun Praphan: That, the first one is the responsibility of the Department of Agricultural Extension. The second one we partner with, hopefully they will join us, the Bank of Agriculture. They will do all the financial management, they will teach them. The third one is for dtac responsibility. The topic is the power of communication and technology. What we are going to teach them is the online marketing. Tools, applications, for example like Gmail, Facebook Page Manager and some application that are useful for them. The second one is how to create marketing content. It is important. They have no knowledge about this at all, like for example, who is their

customer and what is their lifestyle and behaviour also tip and technic. This is a quick win. And the photographic, photographic technic as well, how to take picture and put it online with the application that provide this for free like Snap[...]. The other one is the product value add. How can they make value added of their product. For example their rice, how can they make it more valuable and sell them. And how to do the packaging like some of their product is quite nice, clean but their packaging is terrible and this is why they cannot sell them compared to the, for example the Japanese OTOP. The product is the same, every province, but how they package, it looks attractive and make costumer buy. The other one is branding, how can they do the branding for their community. The other one, the online selling technic and payment, like you just said. We also going to train them about this and we will have workshop after to see how they accept this and how much they learn about this. We also create the community, you know, everywhere we go, like if we go to Chiang Mai, the people who come and train with us, we will create like LINE communities that we can contact after that and they can ask more questions from the trainer. Also they share knowledge among them. This is the training program we set up for the young farmer and hopefully the impact is, we believe that the access to knowledge and information through internet will create the long life learning for them. They can go and learn anytime, anywhere they like through the mobile application and we are sure that after they learn this they will have an idea to improve the farming by focus more on management, how to manage the farming and this will inspire them to create innovative agriculture. And of course the capability to do the online marketing. It is maybe difficult from the beginning but they will learn. Doing by learning. And also we are sure that they can increase their productivity and income for this. Because the application, I tell you later about the second thing, and of course we want them to share their knowledge and experience to other communities, because we focus on training the leaders, the young farmer leaders of the community, so they can share out what they learn to their community. #00:17:41-6#

Mr. Jan Libera: Just one more question about the online marketing. What platform are you going to teach them, because I know that Rak Ban Kerd has their online platform for [...] products. #00:17:52-8#

Khun Praphan: Different, different. Rak ban Kerd has the platform for them.
#00:17:56-4#

Suwanna Onsuwan: Marketplace #00:17:57-2#

Khun Praphan: Ah, marketplace. But this will, the problem with Rak Ban Kerd is that farmer does not know how to go online. It's too difficult for them. #00:18:05-8#

Mr. Jan Libera: No, this is the question, when you said that teaching will involve the online marketing, how to market the products online. What platform will you teach them to use? Is it more how to market ...? #00:18:20-9#

Khun Praphan: About the farmer information first. We will teach them various channel for online and one of them is the farmer information application. And the easiest one is the Facebook. You can start with the Facebook first. Because we will have to discuss more with the Rak Ban Kerd Foundation that they need to improve their online platform. Now we found that it is too difficult for the general farmer or agriculturalist to ... #00:19:01-1#

Suwanna Onsuwan: It is not easy to post their product. #00:19:04-2#

Khun Praphan: Yeah, to post their product. And they have no idea about online marketing, they don't know how frequency, that they have to post it, to update and how to take picture nicely. That's why, we know the problem, that's why we create this curriculum. #00:19:21-3#

Mr. Jan Libera: No, I talked with the COO of Rak Ban Kerd and she also told me that they want to improve their marketplace, I think they are getting aware of the situation.
#00:19:31-8#

Khun Praphan: They improve their marketplace with their idea but they don't know how farmer going to post their product there. Because farmer has no idea about online

marketing, you know, they don't know how to package them. If you just post anything on it nobody is interested and sell it. So, and the farmer will at the end give up for online marketing. That's why we have to educate them first. What is online marketing and how it can help them and what they have to do. Even taking the photo of their product is important. #00:20:14-4#

Suwanna Onsuwan: This is a basic for the online marketing, we want them to create their own online shop. #00:20:22-2#

Khun Praphan: Maybe start with the Facebook first, before go into the farmer application because the platform is quite hard to post, even us, it take a lot of time, you know. We already talked to them, comment to them, recommend them to make it easier. They have to always aware that their customer is farmer and general farmer ... #00:20:52-3#

Mr. Jan Libera: Not used to e-commerce. #00:20:53-8#

Khun Praphan: Yes. And us, that's why we thought it will be useless to go on mass. We have to focus to make the difference for the young farmer first. Then it will, if it's success, they are successful, they will spread their knowledge to other. This is also in line with the government policy, the digital economy. We help creating this. #00:21:25-9#

Mr. Jan Libera: Is it? This was one of my questions I wanted to ask, because the former government but also the current government are planning to, like Thailand 2020, to improve the society in all forms of digital society. Is it, that you also get support from the government or? #00:21:48-4#

Khun Praphan: We don't get support but we actually work together, like I said we signed MoU with the ministry, because they know, dtac, we don't know where the young farmers are, but the Department of Agricultural Extension they have experience with the farmer. They train them and all that. We combine our experience, our skill, our expert together and they will point up the target group for us. And we support, apart

from the knowledge and technology we support, we also support some expenses for training. This is the one day training program. You know we have to support for the transportation of the farmer, lunch break, accommodation, instructor, everything. But this year that's why we target just 7 000 more or less. 7 000 of the young farmer. The second one we are going to do this year for the young farmer, we call it agriculture hub. #00:23:11-9#

Mr. Jan Libera: Agriculture hub? #00:23:13-7#

Khun Praphan: Yes. It's going to be solution that develop and to boost up the agriculturalist, the farmer, to make their business or farming less cost and more profit. Is the agriculture hub, is the application that we and our partner, the Ministry of Agriculture, we select the application, five or six applications. #00:23:47-0#

Mr. Jan Libera: One second, because I just ... #00:23:48-7#

Khun Praphan: That one include the farmer information. #00:23:53-1#

Mr. Jan Libera: Is it the MOAC Centre? #00:23:55-4#

Khun Praphan: No, no. Is not yet post on the application. When will we finish? #00:24:01-7#

Suwanna Onsuwan: Ähm. #00:24:03-0#

Khun Praphan: You know a lot of organization, even the government agency they create lot of apps for agriculture. It's all over the place and the farmer does not know where is it, how to find it and they, mostly they are lack of the knowledge about internet. So we will put these selected application that we already made the survey that it will be most useful for the young farmer. #00:24:36-8#

Suwanna Onsuwan: This an example. #00:24:40-4#

Khun Praphan: And we will put it together. And for the young farmer that use dtac network, they can access this for free, no charge of internet or anything. It consist of soil knowledge, of soil-water, weather and market, commercial agriculture. Of course we will have farmer information app in this. We have the fertilize telemat. You know, if they have the land, they don't have to put all the fertilizer in there, it's costly. They can now calculate how much and what type of fertilizer that the soil need, so they don't need to put ten of the fertilizer in it. So this will reduce cost. Also the analysis of soil-water nationwide and protect plants, insect or anything, they can have the solution to do the protecting. #00:25:59-0#

Mr. Jan Libera: And applications will be free for the farmers in the way that you don't charge internet? It's like the Wikipedia, I think you already did it? #00:26:10-0#

Khun Praphan: We did for farmer information service. They are going to use it for free, no internet charge? #00:26:17-2#

Suwanna Onsuwan: That's the five focuses we got from the workshop in January. #00:26:22-1#

Khun Praphan: So you can see now, that we provide them knowledge and tools to improve their farming and life, their living. This is not going to be permanent. If we find out if they want more, other thing, we put more. #00:26:45-5#

Suwanna Onsuwan: It is owned Ministry of Agriculture. They proposed it, they want to collect the application under the Ministry to introduce them to their officers of agriculture. #00:27:02-0#

Khun Praphan: So this is our 2016 plan that we will, you know, working with the government agency quite slow, so we are going to start next month May. And we do survey before and after. #00:27:22-8#

Suwanna Onsuwan: I show you the young smart farmer. It is not traditional farmer.
#00:27:30-9#

Mr. Jan Libera: Yeah, I saw, when I came here last time, you had the smart farmer award.
#00:27:36-0#

Khun Praphan: Award, yes. We will also still do the smart farmer award. This year team is the young smart farmer. And after we signed MoU with the Agricultural Ministry and we got approached Rangsit University. They have agriculture innovation and they want to help us, support us in sharing the knowledge. So, I think, this is going to be more tangible after we have implemented, maybe end of the year or early next year we get the result and then we can evaluate our project and activity and develop it, improve it to be more benefit to the farmer, young farmer.
#00:28:37-1#

Mr. Jan Libera: Yeah, this is also one of my questions. Did you already a form of evaluation or analysis of the Smart Farmer application, because it's now 3 years since the application ...
#00:28:50-6#

Khun Praphan: Actually, the farmer application is a ...
#00:28:55-3#

Suwanna Onsuwan: [...] to renovate them this year, actually last year.
#00:29:01-5#

Khun Praphan: ... belong to the foundation. What we can do is, we support. We sponsor them and we use it as the tools to develop the farmer. So whatever we want to improve, we have to, you know, like recommend them ...
#00:29:25-3#

Suwanna Onsuwan: Already.
#00:29:25-9#

Khun Praphan: ... to do it. But it's quite slow.
#00:29:29-1#

Suwanna Onsuwan: The plan to implement this year about quarter three.
#00:29:37-7#

Khun Praphan: They do only the application, but the activity is dtac. #00:29:44-5#

Mr. Jan Libera: So dtac is responsible for the smart farmer development with the teaching, reaching out to the farmers and dtac is more the provider of the technology and the service. #00:29:57-6#

Khun Praphan: Yeah and the application, the farmer information application is one of our tools, that's it. #00:30:06-2#

Mr. Jan Libera: And as the application is part of Rak Ban Kerd, you still provide, because you are the ... it's limited to dtac users only? #00:30:23-6#

Khun Praphan: Yes. #00:30:25-2#

Mr. Jan Libera: So you still have some influence and one question would be, because it's hard to see how many people downloaded the application already? #00:30:32-7#

Suwanna Onsuwan: Ah, about 70 000. #00:30:35-7#

Mr. Jan Libera: 70 000. #00:30:41-3#

Suwanna Onsuwan: We promote that on our, online social channel as LINE, dtac LINE and dtac Facebook. #00:30:51-4#

Mr. Jan Libera: And out of this 70, because with application it's difficult to see what kind of farmer download, do you see any specific target area? Is it more in the South, more in the North, is it more in the Bangkok area? Is it possible to see this? #00:31:11-4#

Suwanna Onsuwan: No, actually, we cannot. #00:31:13-5#

Khun Praphan: You see, we, after, you know, when you approached us, we know the problem. They don't set up the systematic to know who is our download. We just know about it because the application belong to them, they do all the development and technical thing with the app. So we already made the requirement for them to, you know, to improve it, to have the data of the download. #00:31:47-6#

Jan Libera: Yeah would be useful #00:31:49-8#

Khun Praphan: Because we also support another application that we do with [...], the m-rescue application. They can record the data of the user, the download, but I don't know why they don't keep the record. So all the data you are asking us, we have, you know, you have to ask Rak Ban Kerd, because they control the application. We just recommend them, you know, when we have a meeting like the price of the agricultural product. We found out it is very useful to the farmer and the farmer would like this information very much, but it's not nationwide yet, just some province, not 77 provinces. They want to know, for example like rice, how much the mill in their province buy it, so they can make plan. You know, like it's worth to lend a truck to go to somewhere else to sell it, something like that. So we are more, dtac is more result oriented. We want to know the difference after we did training with them, not just provide them the application. It's not, application is not everything when they don't know how to use it. We also train them for the, we have two parts, you know, the smart farmer project, the young farmer project is what we focus and the other one is connect the unconnected, what we call. We still have a team to go out and train the communities, you know, community enterprise that have no knowledge about internet at all. We teach them the basics to enter the online world with the simple application like LINE or Facebook. To inspire them first, if they are willing to go beyond, they might be coming to the young farmer. #00:34:26-7#

Mr. Jan Libera: One question I have, because I saw this form of voluntary teams, ... #00:34:31-3#

Khun Praphan: Yeah, we have the voluntary, we call them Net Asa, means volunteer. We have this team, Net Asa, and also we have, they have about 30 people, you know,

they are nationwide, you know, all region. They go out and, in the team and go out and train this group of people. And we also arrange the employee volunteer to go with them. #00:35:07-0#

Mr. Jan Libera: Ok. And do you also have a team in Chiang Rai? #00:35:12-1#

Khun Praphan: In Chiang Rai? No, we have in Chiang Mai. #00:35:15-6#

Mr. Jan Libera: Is it ...? #00:35:16-3#

Khun Praphan: But we can go, you know, if there is a request we can go to Chiang Rai. #00:35:20-7#

Mr. Jan Libera: Is it possible that you maybe give me the contact data of the group leader, so I could also maybe contact the group leader and make another interview or he can show me some farmers. That would be interesting. #00:35:35-6#

Suwanna Onsuwan: Have you met Khun [Maen?] in Chiang Mai? #00:35:38-5#

Mr. Jan Libera: Khun Maen? No. #00:35:40-2#

Suwanna Onsuwan: The farmer Khun Maen, rice berry, we , that we produce ... #00:35:48-0#

Khun Praphan: Never mind, we give the team leader in Chiang Mai. #00:35:49-7#

Mr. Jan Libera: I saw the video of, there is one part of Chiang Mai, where you, one lady ... #00:35:54-3#

Suwanna Onsuwan: Yes, this is Khun Maen. #00:35:56-8#

Mr. Jan Libera: I only saw the video. #00:35:57-3#

Khun Praphan: But you haven't met her yet? #00:35:59-0#

Mr. Jan Libera: No. #00:35:58-7#

Khun Praphan: [towards Suwanna Onsuwan] Maybe you can give the team leader, Chiang Mai team leader? #00:36:03-7#

Mr. Jan Libera: This would be nice. #00:36:05-1#

Khun Praphan: Ok? Is it covered? #00:36:18-0#

Mr. Jan Libera: Yeah, just a few more questions. I know that the application is not your part, but maybe if you can provide me some information, for example, one opinion on your side, if I do the evaluation of the impact on how the farmers feel, would it be useful for you, or ...? #00:36:39-5#

Khun Praphan: Yes, of course, it would be very useful for us, you know, any information about the farmer. #00:36:46-2#

Mr. Jan Libera: Another question is, I saw with, also Telenor Group, that there are some interviews already done with farmers, I think it was still the SMS service, I saw one lady who saved money because she changed fertilizer, so some success stories. Do you have some publications or records of ... ? #00:37:10-8#

Khun Praphan: We can find out for you. #00:37:12-2#

Mr. Jan Libera: ... because it's, in the internet you will find some press release or some small success stories but it's very difficult. #00:37:18-5#

Khun Praphan: Let me check it for you. #00:37:21-5#

Mr. Jan Libera: And, maybe also one more question is, because now you implement a lot of projects, you have big plans. So the questions, the last I have here on the sheet is, where do you see the project in 5 to 10 years? If you have to make an assumption or wishes, what would you wish to have this project in 5 or 10 years. #00:37:46-2#

Khun Praphan: Ok. Let's say two years. Because we have to improve it, develop it all the time, as along the way we see difficulty, we see problem, we see success case then we can always adjusted our project. This year and next year we want to see that, you know, improvement of the young farmer in Thailand. They can earn more, thin innovative and access to more online for their benefit, their knowledge and can help them, you know, in marketing and sale. We want to see, we are doing see survey, like I said, before and after. We will see that, after we trained them, how many of them can improve from what we teached them, the knowledge we provide for them. We have a, we are still developing the survey with the Department of Agriculture. We want to see they are more independent, I mean not independent, they are more, you know, like sale independent, they can stand alone without asking for support from the government for anyone and they can be the one who help driving the Thai economy as well. #00:39:23-9#

Mr. Jan Libera: Do you think that the projects like smart farmers will contribute to bring more young farmers back into agriculture, because ... #00:39:31-4#

Khun Praphan: Yes, that's what we hope. That's what we hope, because now, like traditional farmers, most of them are quite old people, because their children, their son, daughter work in the factory or study in Bangkok. They want to work in the air condition office. Nobody want to do. But in the other way a lot of city people go to the up country buy land and do farming and they can make profit because they have knowledge and they have access to internet for more knowledge and know-how and everything and they can do the online marketing because they have an idea, they are more educated. That's why most of them are success and most of them go for non-chemical or organic farming which is safe for the consumer as well and they know what the consumer want, because they have inside information which is our farmer, original

farmer, young farmer do not have that yet. This why, this is going to develop them into the next step. You know, like in Australia, in America or even in Germany the farmer they do not need a lot of manpower, maybe two or three person can do, can manage the farm, they use machine, they use technology. You understand what I mean? #00:41:15-5#

Mr. Jan Libera: Yes. #00:41:19-1#

Khun Praphan: But, in Thailand we still need a lot of people and the productivity that they got from the land, for example for one rai, is still lower than other country doing the farming. #00:41:34-4#

Mr. Jan Libera: No, I agree with that. #00:41:36-8#

Khun Praphan: So we expect them to be more wealthy, more educated and ... #00:41:46-0#

Mr. Jan Libera: more sustainable or? #00:41:46-8#

Khun Praphan: More sustainable. #00:41:48-8#

Mr. Jan Libera: And maybe also one last question, I don't want to spend more of your time. What challenges do you see in the success of the project. What is the main challenge? Is it that the farmers are uneducated or the farmers don't want to use the internet or what are the challenges you are facing or you are afraid of? #00:42:19-4#

Khun Praphan: The challenge is the first, because we selected group, so we don't have the problem about, you know, they are not willing to learn or to enter the internet. Most of them are willing to. But the challenge is that dtac cannot do this alone. You know, after we teach them we need support for marketing, for example. We want them to feel that, to show them that they can make, they can be better if they use that agriculture knowledge, innovative agriculture and internet, digital to help them, but we want to find

more partner to join us on this to really help us. And we also go just for the small group of people per one year. If we have success we want other organization, strong organization to take this, what we did, to do it, to spread it out. #00:43:30-1#

Mr. Jan Libera: One question. Maybe, when you talk about partners, are you also thinking about competitors? You also have competitors like AIS or True Move, who can also provide mobile internet. So are you considering them also maybe as partner in the aspect of smart farmer? #00:43:51-0#

Khun Praphan: Yeah, but in real life, you know, when dtac is doing something, they won't do the same. So we don't expect the operator to this, but we expect other, like for example other government agency like ICT Ministry, like NBTC, the regulator, the NBTC they should, you know, like have incentive for companies who are doing something like this. You know, they could support with money or maybe waving the, what our expenses on this, like we give free internet, they should, you know, reduce some of the fee they collect from dtac, but is social activity. Also the partner with the other large cooperation, for example like the hotels, the last cooperation to support the products from this young farmer, you know, like the hotel, restaurant. If they join us, they can order the products, just to inspire the farmer of if they do non chemical they do organic and this is their return of benefit. You know, buy directly from them, so they will get a good price, not from the middleman or, you know, they, if they sell to Lotus, Lotus gives them very little price and sell expensive and when the vegetable, the farming product is rotten, they just return it to the farmers. So useless for dealing with the large supermarkets. #00:45:53-5#

Mr. Jan Libera: Ok. Thank you very much. A lot of use ... #00:45:57-6#

Khun Praphan: And one thing that we want them to be able to stand by themselves, you know, because it, do you know that the CP, CP the large company, is like farmer become their worker, their employee, you know, they give them seed for rice, the farmer grow them, has to sell to them, you know, and they make all the price. #00:46:27-0#

Suwanna Onsuwan: They control all the [...] #00:46:29-4#

Khun Praphan: And you know, when you grow rice, the seed is, you cannot use it to grow again, because they make something, you know that, this is crazy. So if they can stand by themselves, you know, the farming in Thailand, agriculture is going to be sustainable. #00:46:52-8#

Suwanna Onsuwan: Or the MK restaurant that we know from our farmer. #00:46:59-2#

Khun Praphan: Like MK restaurant, the big restaurant, if they support this kind of farmer, it's going to inspire all the farmer in Thailand. #00:47:09-4#

Mr. Jan Libera: So, you also would like to bring companies in who are buying the products right from the farmer? #00:47:18-6#

Khun Praphan: To this project. #00:47:19-5#

Mr. Jan Libera: Yes. Ok. Sounds like a very big but good plan. #00:47:24-1#

Khun Praphan: Yeah, that's why we cannot tell you in five year. We can tell you in two years and after two years we maybe have more knowledge, we have more experience, we can develop it. #00:47:33-3#

Mr. Jan Libera: Are you also in contact with other countries or other companies form around the world, because application is a very popular thing right now. #00:47:45-8#

Khun Praphan: No. Good point, you know, like Telenor, they are Norwegian, in the future if we got good products maybe we ask Telenor to be the distributor of the farming product from Thailand to Norway, you know, to help buying it, or maybe German. #00:48:08-0#

Mr. Jan Libera: Ok. #00:48:09-0#

Khun Praphan: Ok. For the information you request ... #00:48:12-5#

Mr. Jan Libera: Yes, we can maybe stay in contact, that would be nice. Thank you again for bringing me here, sharing your information and I would like to stay in contact and maybe get some more information. #00:48:29-5#

Suwanna Onsuwan: In June we will be in Chiang Mai. #00:48:32-6#

Mr. Jan Libera: Perfect. #00:48:33-4#

Khun Praphan: You still here? #00:48:34-0#

Mr. Jan Libera: Yes, in June I will be still here. #00:48:35-8#

Khun Praphan: Yeah you can join us at the training. #00:48:39-0#

Mr. Jan Libera: Yes. It would be lovely to see it in practice and join you. Thank you.

APPENDIX 5: Interview with Farmer One

This was the first interview on the 4th of June during my trip to Chiang Rai. The interview was conducted in Mae Sai, Chiang Rai and included a couple managing a small agricultural area. Their main use of the garden was to produce for themselves and sell the surplus. Both were aware of the Farmer Info application and were using it. As an interpreter Sarocha Anukul (Poy) a student from Chiang Mai University was assisting. After a short introduction and some introducing words from my side the interview started. It has to be noted as in the other interviews this is only a transcription of the English part of the interview. The Thai parts have not been considered and noted in the transcription #00:00:04-3#

Jan Libera:: First of all again, you can thank her that she is willing to meet with us and then maybe ask her that she briefly introduces, like yesterday with the interview, age, a little bit family background, educational background ... #00:00:21-8#

Sarocha Anukul (Poy):: Ah ok. She study about nurse and the other guy, he do like freeze product, sell the freeze product. #00:00:57-5#

Jan Libera:: The other guy is her brother? #00:01:02-1#

Sarocha Anukul (Poy):: Her boyfriend. #00:01:08-9#

Jan Libera:: Mhm. And the agriculture is part of the family business or? #00:01:17-3#

Sarocha Anukul (Poy):: she does the agriculture ... (THAI) ... celery, cabbage ... (THAI) ... only vegetable #00:01:52-6#

Jan Libera:: So she is, when she studies nursery, it's like high school or university #00:01:57-1#

Sarocha Anukul (Poy):: The university. #00:02:05-2#

Jan Libera:: Mhm. So did she ever lived here in the area or did she move from somewhere else? #00:02:13-9#

Sarocho Anukul (Poy):: She just came here for seven to eight years. #00:02:24-3#

Jan Libera:: Where did she ...? #00:02:26-8#

Sarocho Anukul (Poy):: She is ... #00:02:39-5#

Jan Libera:: Born in the area #00:02:40-4#

Sarocho Anukul (Poy): Yeah. Born this area and she just move because this village just build. #00:02:47-7#

Jan Libera: Mhm. And since when are they doing agriculture? #00:02:52-6#

Sarocho Anukul (Poy): One or two years. ... (THAI) ... She grow flower but not for sale, just give to someone. #00:03:26-5#

Jan Libera: And why did they decide to do agriculture? Because they say one or two years ago, did they get new land or did they buy it to change? #00:03:39-0#

Sarocho Anukul (Poy): This is a public area, I mean they can grow something and just for sale, they do not have the certification. #00:04:10-1#

Jan Libera: So its's like a public garden? #00:04:11-8#

Sarocho Anukul (Poy): Yeah. It belongs to the government, but the government let them to grow something because if the land was left, it will like something upland grass. So it's better to give to the people. #00:04:47-9#

Jan Libera: And a does she know the land size approximately, she is cultivating?
#00:04:53-9#

Sarocho Anukul (Poy): She cannot measure approximately. #00:05:33-3#

Jan Libera: And a what is her income monthly, because she ... #00:05:39-0#

Sarocho Anukul (Poy): You mean for this house? #00:05:40-9#

Jan Libera: Yeah, for the total and what part is for agriculture only? #00:05:48-6#

Sarocho Anukul (Poy): Around 1 000, äh 10 000 Baht per month, yes. ... (THAI) ...
around 4 000 - 5 000 per month ... (THAI) --- just only her #00:06:28-1#

Jan Libera: Mhm, So she earns around 10 000 and out of the 10 000 4-5 000 is from
agriculture? #00:06:39-2#

Sarocho Anukul (Poy): Is per month, na #00:06:40-4#

Jan Libera: Mhm. And how does she sell her products? #00:06:46-7#

Sarocho Anukul (Poy): She sells at the market, she just goes to the market and she can
sell wherever. #00:07:02-2#

Jan Libera: How often per month or how much time does it take? #00:07:07-2#

Sarocho Anukul (Poy): Twice a week. ... (THAI) ... #00:07:20-3#

Jan Libera: For the whole day or just evening, morning? #00:07:24-4#

Sarocho Anukul (Poy): Just evening. ...(THAI)... Around 3-5 pm ...(THAI)... she sell
all of the product. #00:07:43-3#

Jan Libera: And what is the average price she charges per kilo? #00:07:48-0#

Sarocho Anukul (Poy): Per bunch. #00:07:53-1#

Jan Libera: Or bunch? #00:07:54-1#

Sarocho Anukul (Poy): Yeah. 10 Baht per bunch. #00:08:08-2#

Jan Libera: Does she have any membership of an organization or Royal Project or ...?
#00:08:15-1#

Sarocho Anukul (Poy): No. #00:08:32-3#

Jan Libera: Ok. And does she, is the land now only by her cultivated or is she sharing, rotating with other people that they switch the fields, or? #00:08:42-7#

Sarocho Anukul (Poy): It belong to her now. Doesn't have to switch, but other farmer will come, come and grow the plants near to her. #00:09:08-5#

Jan Libera: And when it comes to input, what does she use? #00:09:12-0#

Sarocho Anukul (Poy): Ah, you mean fertilizer? #00:09:15-1#

Jan Libera: Yes, and also the seeds. #00:09:17-9#

Sarocho Anukul (Poy): She buys the seed from the market, but for the fertilizer, she doesn't use the chemical thing, she uses the garlic residue ...(THAI) ... she bought the garlic residue from the factor, about the 10 Baht per bag ...(THAI)... and the big bag, I mean the tod, no, the bag around 40 Baht ...(THAI)... #00:10:32-3#

Jan Libera: So 10 Baht for the small bag? #00:10:34-0#

Sarocho Anukul (Poy): Yeah, yeah but she bought, ...(THAI)... #00:10:43-0#

Jan Libera: And the garlic residue she uses as fertilizer or pesticide? #00:10:48-2#

Sarocho Anukul (Poy): Fertilizer ...(THAI)... no chemical pesticide. ...(THAI)... oh and dung, cow dung. #00:11:14-9#

Jan Libera: She gets from other farmers or? #00:11:17-6#

Sarocho Anukul (Poy): Bought from the market. #00:11:27-0#

Jan Libera: And for the seeds, also like yesterday the question, did she know which seeds she wants or did she get any kind of advertising information? #00:11:43-2#

Sarocho Anukul (Poy): She decide by her own #00:12:01-0#

Jan Libera: On ...? #00:12:01-9#

Sarocho Anukul (Poy): On how to ... (THAI)... She looks at the package and she thought: Ah it's quite beautiful #00:12:20-6#

Jan Libera: Ok, so she was more or less charging on the package #00:12:24-4#

Sarocho Anukul (Poy): Yes and the level, the qual.. I mean the advertise on the package #00:12:42-4#

Jan Libera: And what is her opinion on organic agriculture, she is using already fertilizer as organic form. What does it mean for her to use organic agricultural inputs? Is she doing it because of health concerns, because she ...? #00:13:01-7#

Sarocho Anukul (Poy): She concern more on health, because they consume by their own and the insect has a few, a small, like a not too much harm for the product. #00:14:04-2#

Jan Libera: In her opinion does she think she can ask for higher price if she uses organic instead of chemicals? #00:14:11-2#

Sarocho Anukul (Poy): He said of the local market like this he cannot raise up the price, but maybe in the supermarket they can raise up the price. Because consumer does not care about the use or non-use chemical. #00:15:55-9#

Jan Libera: Because, he mentioned the supermarkets, do they try also to sell to supermarkets? #00:16:00-5#

Sarocho Anukul (Poy): No. But he has been to the supermarket to check the price. He knows about the how to, I mean if he wants to sell in the supermarket, he has to do like a good package. He knows but he cannot do that. #00:16:29-7#

Jan Libera: Ah what is their production in total like in a season, how much harvest they have? How many kilos, how many bunches? #00:16:41-2#

Sarocho Anukul (Poy): You mean in season? #00:16:42-7#

Jan Libera: Yeah in one season or per year? #00:16:45-4#

Sarocho Anukul (Poy): Ah, they cannot approximately, the product, because they do not like doing not like a business in the agriculture. They just grow something and just for ... #00:17:12-9#

Jan Libera: Sell it right away. #00:17:13-5#

Sarocho Anukul (Poy): Yeah. #00:17:14-0#

Jan Libera: And in a season, what do they consider, the problems they have? You mentioned that there is not much problem with the pesticides or disease, but is there water shortage, any other problem? #00:17:28-1#

Sarocho Anukul (Poy): None. ...(THAI)... They do not face the water shortage problem because they grow the plant near the irrigation something, but the main problem is still have to be the worm. Not the disease but the ... #00:18:35-8#

Jan Libera: Pest. #00:18:36-3#

Sarocho Anukul (Poy): Pest, yes. #00:18:37-2#

Jan Libera: And do they have any idea how they can fight the worm, what possibilities they have or did they try to get any information on how to combat? #00:18:48-0#

Sarocho Anukul (Poy): Just keep it out ...(THAI)... Impractical right? #00:19:19-3#

Jan Libera: And do they also have from the, because it's a side business, is it time consuming or do they consider it worth the time they spend on the field what they at the end get as a result? #00:19:30-3#

Sarocho Anukul (Poy): She says it worth to do the agriculture, because she just do like a hobby and she can also consume by herself with safety. #00:20:11-7#

Jan Libera: So she knows what she is eating. And because she is doing it more as a hobby, did she have any background in agriculture or how did she get all the information on how do I plant the crop, how do I harvest, all these steps? #00:20:35-1#

Sarocho Anukul (Poy): She get the knowledge from her parents. #00:20:53-5#

Jan Libera: So the parents are farmers or? #00:20:57-3#

Sarocho Anukul (Poy): Their parents not the farmer, just only do their job and agriculture is like a hobby as well. #00:21:19-1#

Jan Libera: And maybe the last part would be also about the information. When she has one year or one season, also on the different steps, from buying the seeds until selling on the market, what information are important? Is it on, how the weather will be the next days, on when to harvest on the best time, what kind seeds, what information on all these steps is most important for her? #00:21:45-7#

Sarocho Anukul (Poy): He told me about the, when the crop is growing, young bud, they would like to know how to manage the pest, how to get rid of the pest. the information would be like pest, organic pesticide. #00:23:03-3#

Jan Libera: And ... #00:23:08-8#

Sarocho Anukul (Poy): And concern about the price. If they do like organic crop, they will get the higher price? In ...(THAI)... he expect for the higher price for the ...(THAI)... he knows how to raise up the price, but the cost was high too. #00:23:49-5#

Jan Libera: So what was he trying to do to raise up the price? #00:23:52-9#

Sarocho Anukul (Poy): He just thinking about. Just his own idea. #00:24:07-0#

Jan Libera: And, back to the pest and the price. Does he have anyone who he contacts, for example the worms. Now he has the problem, is there any extension officer, is there a university he can contact or is he may be using the application? #00:24:22-9#

Sarocho Anukul (Poy): He travels to get knowledge and also in the application. His girlfriend looks into the application. #00:25:04-3#

Jan Libera: And, when he travels, what does it mean? Where is he going? #00:25:09-4#

Sarocho Anukul (Poy): To another farm, like an organic farmer to do how pattern to do the organic. #00:25:17-3#

Jan Libera: Are there a lot of other organic farms around the area? #00:25:20-7#

Sarocho Anukul (Poy): Around 2 or 3 place. ...(THAI)... he goes to the, like a restaurant, you know (Thai word)? The restaurant that sells only the salad and grow the vegetables by themselves. He goes to that restaurant and like a looking for how do they grow in organic. #00:26:18-7#

Jan Libera: And they just share the knowledge with him without a problem or do they have any concerns? #00:26:26-7#

Sarocho Anukul (Poy): He talked with the owner of the organic farm and keep the contact with the owner. So if the owner of the organic farm wants to, like, if he invites the owner to explain, to do like a meeting, the owner of the organic farm will willing to come, to give the knowledge. #00:27:11-9#

Jan Libera: And did they also ever call the farmer helpline from Rak Ban Kerd asking for advice? #00:27:22-4#

Sarocho Anukul (Poy): They contact to Rak Ban Kerd, but not for asking for help, just only ...(THAI)... just in general thing, to keep the contact, but not for help ...(THAI)... she contact with Rak Ban Kerd because of the another farmer come to ask her and her like a middleman to contact Rak Ban Kerd asking for help. They did not face the problem by themselves but other people. #00:28:39-3#

Jan Libera: So she was calling for another farm, ok. It's interesting. #00:28:45-2#

Sarocho Anukul (Poy): They also told the farmer that come to ask for help that they can go to, like call to Rak Ban Kerd foundation directly. #00:29:13-5#

Jan Libera: And now for the agricultural part I think that's ok. Now more to the mobile phones, also the same questions like yesterday. When they purchased their first mobile phone, how many years ago, when they purchased their last phone #00:29:31-2#

Sarocho Anukul (Poy): How much? #00:29:32-8#

Jan Libera: How much it was and I guess now, we see it on the table, it is a smartphone. #00:29:37-0#

Sarocho Anukul (Poy): 20 years ago ...(THAI)... the last phone is one year already ...(THAI)... around 20 000. #00:30:28-3#

Jan Libera: And the last phone was also his first smartphone or he had a smartphone before the last one? #00:30:32-1#

Sarocho Anukul (Poy): Around 4 years before, 4 device before. #00:30:55-8#

Jan Libera: But all smartphones? #00:30:57-6#

Sarocho Anukul (Poy): Yeah. 4 of, before this is smartphone. He change because of the sometimes the device is quite slow. #00:31:22-1#

Jan Libera: And how much is he paying per month for the services like internet, calls, messages? #00:31:28-3#

Sarocho Anukul (Poy): Around, approximately 1 000. #00:31:44-3#

Jan Libera: And both of them are dtac costumers? #00:31:49-7#

Sarocho Anukul (Poy): Both, yeah dtac. #00:31:50-9#

Jan Libera: What do they think of the reception, the service around the area here? #00:31:57-3#

Sarocho Anukul (Poy): He is, he thinks that dtac is the best provider, because he has used the AIS before, but he feel like dtac still better ...(THAI)...In this area dtac would be the best. #00:32:45-7#

Jan Libera: And also about when he had his first smartphone, was it a very difficult thing to learn, to understand, to use or was it without a problem? #00:33:01-0#

Sarocho Anukul (Poy): At first he think is would like difficult to use, but when he use frequently, he feel like is quite easy to use. #00:33:48-3#

Jan Libera: What does he think is the most or what is better of a smartphone compared to a normal phone for him? Is it, you have the bigger display, you have better apps or what is the most important thing for him? #00:34:05-2#

Sarocho Anukul (Poy): To compare with the basic phone and the smartphone? #00:34:09-2#

Jan Libera: Yeah. #00:34:09-4#

Sarocho Anukul (Poy): He knows the like the knowledge, he can get the knowledge and information directly and suddenly. #00:34:40-5#

Jan Libera: So for him it's important to get the information on time whenever he wants? #00:34:47-7#

Sarocho Anukul (Poy): Yeah ...(THAI)... on time and convenient thing. #00:34:58-4#

Jan Libera: So how much time he thinks he spends per day with his phone searching for information, playing games, all together? #00:35:06-3#

Sarocho Anukul (Poy): Around 4 hours ...(THAI)... #00:35:45-1#

Jan Libera: So, then the last part of the questions. The last part would be about the application and the service of Rak Ban Kerd and dtac. And the first question would be since when he is using the application and how he learned about it. If he gets any kind of training or was he approached by the Rak Ban Kerd team in Chiang Rai? And also how often he is using or both of them are using the application? #00:36:20-5#

Sarocho Anukul (Poy): They were approached by Rak Ban Kerd, Mrs. Nongluck. She came to introduce the application and they just access to the application one year ago. And then ask for the how frequently, they said about three or four times a week ...(THAI)... #00:37:48-3#

Jan Libera: So when they were approached, they also got kind of training, did the Rak Ban Kerd team introduce the app, all the features of the app or did they just tell them about the application and that was it? #00:38:02-0#

Sarocho Anukul (Poy): Just old, just introduce but no training. #00:38:25-3#

Jan Libera: And when they just received the app, was it difficult for them at the beginning to see how it works or was it not necessary to get any kind of training, was it just understandable right away? #00:38:40-5#

Sarocho Anukul (Poy): She thinks it's difficult to use. It would be better if they have someone to train them. #00:39:11-6#

Jan Libera: And what exactly in her opinion is ... #00:39:14-8#

Sarocho Anukul (Poy): What is difficult? #00:39:15-8#

Jan Libera: ... difficult about the application. Is it the whole concept of the application on how it works or are difficult things to access? #00:39:26-0#

Sarocho Anukul (Poy): Is not that difficult but confusing for the ...(THAI)... at first, confuse how do they like a, they do not know that feature was working for. #00:40:09-2#

Jan Libera: And do they know or why Rak Ban Kerd approached them? Was it because they were dtac costumers and they had a dtac number or did they apply for the SMS-service before? #00:40:21-7#

Sarocho Anukul (Poy): At first he is like the helper for here, in this area, like a for something bad happen, the other people will come to see him and ask for the suggestion and help. And he approached to Rak Ban Kerd first, not Rak Ban Kerd approached to them. They approached to Rak Ban Kerd and Ms. Nongluck, that's why they can contact Ms. Nongluck. #00:41:55-9#

Jan Libera: And how did he learn that there is a Rak Ban Kerd team in Chiang Rai. Was there kind of advertising somewhere or was it mouth to mouth? #00:42:05-9#

Sarocho Anukul (Poy): Because his work is like a for the disaster warning. So he Ms. Nongluck come to see him to like a training, not training, to, because the Rak Ban Kerd foundation want to contact with the disaster warning, so that's why they can contact to each other. #00:43:31-1#

Jan Libera: Ok. So more or less Rak Ban Kerd approach them because they wanted to work with the disaster management and then he learned about the app and so he approached Rak Ban Kerd for the application. So he didn't use the SMS-service before? #00:43:49-0#

Sarocho Anukul (Poy): Never use. #00:44:06-6#

Jan Libera: And, then back to the application. What is the most important feature for him, because you know there are the agricultural news, the prices, the videos, the online

shop. What of all this he would consider the most crucial for him or for them?
#00:44:23-2#

Sarocho Anukul (Poy): Video. #00:44:45-7#

Jan Libera: Ok, as she said, that the video I guess is the most important. Does she have any examples where it exactly helped her, like where she learned something new or was able to save money, improve her production, improve the yield. Anything where video in particular was very helpful? #00:45:07-6#

Sarocho Anukul (Poy): She said it is easy to understand more than the reading and she likes the step by step how to do, like how to grow this plant, how to do the pesticide, bio. #00:46:02-3#

Jan Libera: But is there any video she would say this was the one after shed used for example the garlic, was it introduced by Rak Ban Kerd or any method she really adopted by the video or maybe a video out of which she was able to save money, like yesterday he mentioned that he was able to cut down his input use by 50%. Anything which really affected her, had an impact on her agricultural practices? #00:46:33-9#

Sarocho Anukul (Poy): Some tell to reduce the cost of the pesticide. #00:47:40-3#

Jan Libera: And, does she also check the market price for example so that she knows when the celery is higher in the application, she will also increase the price on the market or she is more using the market prices as her ...? #00:48:01-2#

Sarocho Anukul (Poy): Most of the time they use only in the market price. ...(THAI)... she still lack of the knowledge of the price in this area. Because the price will come for another area. #00:49:03-6#

Jan Libera: So the application doesn't cover ... #00:49:05-7#

Sarocho Anukul (Poy): This area. So she just uses the market price. #00:49:13-0#

Jan Libera: And, because Rak Ban Kerd has also an online shop, but nowadays also people sell their products by Facebook or anything. Would they like to do it, are they doing it already or what are obstacles which might limited it, that they are doing it? #00:49:32-6#

Sarocho Anukul (Poy): She said, because of the vegetable is quite fresh and if they sell by internet or app, it would be take the time to transportation and it will be rod. So she doesn't want to try. #00:50:18-7#

Jan Libera: And one of the last questions would be, because they have the app since one year now. What would they change, add, what kind of criticism they have about the application or also how it's structured? Anything like this. #00:50:41-2#

Sarocho Anukul (Poy): You mean the change of the application? #00:50:43-8#

Jan Libera: Yeah, what would they, if they now can say I wanna change this, what would they change? Or is there anything missing, he is working for the disaster management, is there disaster warning maybe missing? Anything missing or do they want to criticise anything? #00:51:01-5#

Sarocho Anukul (Poy): She doesn't have a problem with the application, but she wants the people around in this area, want to use this application also because of she can exchange the knowledge, exchange the price, all that.(THAI)... Some people here, they use the application but they didn't work on the agricultural field. #00:52:26-8#

Jan Libera: Ok, so what were they using the application for? #00:52:33-8#

Sarocho Anukul (Poy): Just ...(THAI)... Just only look for it ...(THAI)... I ask them for the another people that we can go to for interview, but ... #00:53:15-3#

Jan Libera: They don't know. So in their opinion nothing has to be added to the application, no more information they would like to know about, also maybe agricultural weather or anything they think right now is missing? #00:53:34-3#

Sarocho Anukul (Poy): She concerning about the price in this area. #00:54:00-7#

Jan Libera: Where is the closest market, the application is covering? #00:54:06-0#

Sarocho Anukul (Poy): Only in Chiang Rai. #00:54:25-2#

Jan Libera: So, if the app says, for example, they would get 15 Baht in Chiang Rai. Would they consider to take their products from here to Chiang Mai? Because now they sell it for 10 Baht at the market and let's say they could achieve 5 Baht more price. Would they consider the way with all the petrol and time they spend on the road as useful to sell the products in Chiang Rai? #00:54:56-1#

Sarocho Anukul (Poy): Not worthy ...(THAI)... But if they got the big, the large amount of the product they prefer to go there, but in this case they just only do like a hobby. So just only sell in this area would be ok. #00:55:58-1#

Jan Libera: So, I think that's from my side. I they would like to add anything about any topic, they can feel free right now if they want to share any experience they had with the application or Rak Ban Kerd or anything they might think I should know about. #00:56:17-3#

Sarocho Anukul (Poy): No. #00:56:30-9#

Jan Libera: Then only one thing, because I forgot it at the beginning. I forgot to ask about the age of both. #00:56:38-9#

Sarocho Anukul (Poy): 46 and 18. #00:56:48-6#

Jan Libera: 46 and 18? Ok. You have the names I guess? Thanks.

APPENDIX 6: Interview with Farmer Two

This is the second interview on the 4th of June. The interview was planned to be part of the data collection regarding app users. However, the person interviewed turned out to be not an app users. Nevertheless, the interview was conducted to shed more light onto the current agricultural situation in Chiang Rai Province. The interviewee also is a "best-practice" farmer. Strongly commercialized he gave inside into issues other farmers could not provide. The interview started after a first words of introduction. #00:00:04-1#

Sarocho Anukul (Poy): He was born in this area and now he almost 57 years. And now he do agriculture, like pomelo, I told you, and now he got the position on the head of the village. And he do the pomelo for the export. Since ... #00:01:59-3#

Jan Libera: You can give me the Thai date. #00:02:00-3#

Sarocho Anukul (Poy): 2503. ...(THAI)... European countries. Netherlands, UK and France. Export, start to export European country. ...(THAI)... and also Asian country, but this year he stopped export to the European country, because of the world market price. ...(THAI)... #00:03:35-1#

Jan Libera: Asian countries like Hong Kong? #00:03:38-6#

Sarocho Anukul (Poy): And southern part of China. #00:03:46-2#

Jan Libera: Ok. Maybe before we come back to the whole agriculture things. Just some personal things, like the educational background, the income if he wants to share and then also which of the income is for agriculture and which for others. And if he is engaged since he was born in agriculture or why he chose agriculture. #00:04:13-7#

Sarocho Anukul (Poy): Since 2522. He do maize around 10 years. #00:04:48-6#

Jan Libera: Maize? #00:04:50-2#

Sarocho Anukul (Poy): Maize for ten years. ...(THAI)... Since 2532 the company, the chemical fertilizer company ... #00:05:32-1#

Jan Libera: Since 25..? #00:05:33-6#

Sarocho Anukul (Poy): ...32, the fertilizer company comes to promote the pomelo. ...(THAI)... He has almost 20-30 rai #00:07:13-2#

Jan Libera: 20-30? #00:07:14-7#

Sarocho Anukul (Poy): Yeah. He changed to grow the pomelo because of the neighbour, I mean the field near to him, he, the farmer grow the pomelo full of the area and get good product, good benefit. So he saw the, that benefit and changed all of the area, his area to be pomelo. And then ...(THAI)... He talking about the, how he structure the group and he, like a, he going to the group, in a like, to manage the group asking for the factory, asking for the GMP and GAP also. ...(THAI)... Ah, lower-high school. #00:09:32-6#

Jan Libera: High school? #00:09:33-8#

Sarocho Anukul (Poy): Yeah. #00:09:35-4#

Jan Libera: And the group is like a farmer group? #00:09:37-9#

Sarocho Anukul (Poy): Yeah, farmer group? #00:09:38-9#

Jan Libera: Only for pomelo? #00:09:40-1#

Sarocho Anukul (Poy): Yeah. #00:09:41-9#

Jan Libera: And what is he earning per month or year from the farming? #00:09:48-9#

Sarocho Anukul (Poy): 40-50 000 per month. #00:10:22-3#

Jan Libera: That's an nice salary. But only from agricultural? #00:10:30-6#

Sarocho Anukul (Poy): Only from agriculture ...(THAI)... And get some money from selling the chemical, but a few. #00:11:01-6#

Jan Libera: Like the shop here? #00:11:02-9#

Sarocho Anukul (Poy): Yes. He says it's a few, because he only mainly use for himself. And if the neighbour come to ask, what good for the doing the farm, he will give the suggestion and sell the product. #00:11:21-8#

Jan Libera: And he already said that he is mainly exporting to Netherlands, Asian countries, but does he also still sale here or does he have other marketing channels except for export? #00:11:34-9#

Sarocho Anukul (Poy): In season, some of the product he sale in this area and he concerning about this year. This year, is a, like a, in the middle part of Thailand they face the problem of water shortage, so the product of pomelo in that area would not be so good. So the price of the pomelo in this area would be like upper higher. #00:12:57-5#

Jan Libera: So he is expecting higher prices because of the water shortage in ... #00:13:01-7#

Sarocho Anukul (Poy): In other area, yeah. #00:13:03-6#

Jan Libera: So he is concerned or he is happy about it? #00:13:06-7#

Sarocho Anukul (Poy): Yeah, he is happy about it. #00:13:09-2#

Jan Libera: Ok. And when he started to export the products. How did it come? Was he approached by a company that he can export it, did he look for himself or does he have a middleman in Europe or Asia? #00:13:26-4#

Sarocho Anukul (Poy): In 2544 he has a friend at the Golden Triangle, that we have been. He has one plot of the pomelo and they know each other. So he brings the middleman from Hong Kong to see him and now that's the beginning of the exporting. #00:15:01-0#

Jan Libera: Ok. So over this middleman he also came to Europe? #00:15:04-2#

Sarocho Anukul (Poy): For the exporting to the European country it come from the company. #00:17:05-4#

Jan Libera: Can he give the name of the company? #00:17:07-9#

Sarocho Anukul (Poy): Face Partner. #00:17:13-5#

Jan Libera: Face Partner? #00:17:14-2#

Sarocho Anukul (Poy): Yeah. I don't know. #00:17:16-9#

Jan Libera: I will google it. And, because the already mentioned GMP, GAP. When he exports to Europe, because normally the market entry level is ... #00:17:34-5#

Sarocho Anukul (Poy): ...higher. #00:17:35-3#

Jan Libera: ...higher. Concerning standards, quality, consumer production. What did he have to change with his agricultural practices? Did he change any chemicals, fertilizer? #00:17:54-7#

Sarocho Anukul (Poy): Ah, the. He asking for the help for, to the Highland Project of Wawee, Wawee Highland Project something. And ask for the help that, ask for someone to take care of the measurement of the chemical. #00:19:25-7#

Jan Libera: So he got help to reach the certain standards? #00:19:30-0#

Sarocho Anukul (Poy): Yes. #00:19:31-2#

Jan Libera: Does he get any visits that someone from Europe or from the company Face Partner controlling what he is using? Are they checking or is he just trying to keep the standards by himself? #00:19:40-9#

Sarocho Anukul (Poy): The Wawee Highland Project come to measure and give them the certificate of GAP. So the farmer who can export with the Face Partner company should have, must have the GAP certification. #00:21:01-0#

Jan Libera: The Wawee, is it the same like the coffee? #00:21:05-9#

Sarocho Anukul (Poy): Yes ...(THAI)... in overall they do coffee, longan pomelo ...(THAI)... agricultural extension I think contact to the Wawee project to come for the measurement. #00:21:58-0#

Jan Libera: Ok, and ... #00:22:00-0#

Sarocho Anukul (Poy): So he contact by himself. #00:22:03-6#

Jan Libera: But they told Wawee that they should measure on the field? #00:22:07-8#

Sarocho Anukul (Poy): He asking to the main extension office and the extension office asking for the help from Wawee. Like get the connection. #00:22:25-5#

Jan Libera: Then, when it comes to input, as he mentioned, because of water shortage there might be a lower yield. So means they have to irrigate quite a lot the pomelos?

And what is he using as inputs, like fertilizer, pesticides, he also already mentioned I think that they use chemicals. #00:22:48-7#

Sarocho Anukul (Poy): No, he, some part is chemical. #00:22:51-2#

Jan Libera: That you maybe ask a bit deeper there and also the seeds he used to grow the pomelo? Got the advice? #00:23:00-4#

Sarocho Anukul (Poy): Not like seed, but is like small ... #00:23:01-2#

Jan Libera: Or seedling. #00:23:03-2#

Sarocho Anukul (Poy): ... Small tree, yeah, seedling. #00:23:05-1#

Jan Libera: Like where he get it from? And does he know any quality difference between the pomelo, is there a special variety? #00:23:12-6#

Sarocho Anukul (Poy): He build a tap from the reservoir to his field ...(THAI)... Mainly he uses chemical but he uses some bio, like a after he pruning, trimming the tree, once, only once ...(THAI)... He got the seedling from the Nakhon Phratum province ...(THAI)... In 2532 #00:26:30-5#

Jan Libera: 2532? #00:26:32-1#

Sarocho Anukul (Poy): Yeah, he go, travel to Nakhon Prahtum to look for opportunity another crop that can use instead of maize. #00:26:46-2#

Jan Libera: And then he ...? #00:26:48-8#

Sarocho Anukul (Poy): He has the contact to Nakhon Phratum and he asked for the seedling and he doesn't know about the variety. He just order by phone. #00:27:06-0#

Jan Libera: Ok, and now. Because he says he uses mainly chemicals, it would be interesting what his opinion is about organic agriculture. Would he like to shift to organic agriculture? Or maybe does he use chemicals there is no alternative for pomelos? And ask him maybe too, if he can achieve a higher price he would produce organically, especially considering that he is exporting to Europe where organic products are already stronger on the market. (short break) #00:28:11-9#

Sarocho Anukul (Poy): He said about the, is hard to change and shift to the organic way, because like a the orange family is use a lot of chemical. Is hard to use only bio thing. #00:29:21-2#

Jan Libera: Does he know if he could get a higher price from especially European countries if he would produce organically? #00:29:31-3#

Sarocho Anukul (Poy): He used to try in the organic way but unsuccessful because of the not exactly market. The market not stable. #00:30:43-6#

Jan Libera: For all the countries or where was the market unstable? #00:30:50-0#

Sarocho Anukul (Poy): Exporting country ...(THAI)...They have some order that ask for the organic pomelo but it's small scale. So he decided not to do because of it's not worth. #00:31:52-4#

Jan Libera: One thing I forgot to ask at the beginning is also. What is his yield per seasons or per year or per month? Whatever he wants to state. How many kilos, how many tons he can get from his 20-30 rais? #00:32:10-5#

Sarocho Anukul (Poy): (small break - map with records is brought) #00:32:42-5#

Jan Libera: They write it down? #00:32:44-8#

Sarocho Anukul (Poy): Mhm. #00:32:46-8#

Jan Libera: Ah. That's useful. #00:32:49-2#

Sarocho Anukul (Poy): Ah. Around ...(THAI)... #00:33:21-1#

Jan Libera: 11 ton? #00:33:23-5#

Sarocho Anukul (Poy): Yeah, 11 ton, per year, na #00:33:27-0#

Jan Libera: Per year? #00:33:27-9#

Sarocho Anukul (Poy): Mhm ...(THAI)... They did since they export. #00:34:08-2#

Jan Libera: Mhm. And how stable is the yield? Does he see a lot of changes or? #00:34:14-6#

Sarocho Anukul (Poy): They got the price from Rak Ban Kerd. Is not exactly the Rak Ban Kerd foundation. Is called Sam Nua Rak Ban Kerd, like Get back to your Hometown, something like this. #00:34:46-1#

Jan Libera: Yeah, they have several, I think two companies. #00:34:52-0#

Sarocho Anukul (Poy): That use similar name. #00:34:55-9#

Jan Libera: So it's similar to the OTOP? #00:35:01-1#

Sarocho Anukul (Poy): Yeah like that. He got a lot of price. ...(THAI)... #00:35:20-8#

Jan Libera: The prices are about quality or what are the prices about? When he gets an award is it because he came back and promotes pomelo or is it because of the good quality? #00:35:34-2#

Sarocho Anukul (Poy): Ähm ...(THAI)... he has someone from the processing come to help him take care of his product after harvest and you ask about ...? #00:36:21-6#

Jan Libera: The awards. #00:36:23-6#

Sarocho Anukul (Poy): The awards, yeah. He get, it makes like a reliable and he has the consumer that believe on him. And call him by phone to order the pomelo and he send by post to the consumer. #00:36:50-2#

Jan Libera: So he also not only sales by market here but he really sales by order directly from consumer. Ok. Back to the agricultural part. What are the problems he faces during a season? Are there any he can report or what are the main problems? #00:37:11-4#

Sarocho Anukul (Poy): The greening diseases of the pomelo and then he go to like a in the bigger scale of group, include the southern part, Nakhon Phanom, middle part and all staff. and he get the help from professor from Kasetsart university to get the insecticide and he said it's quite, it's better. #00:39:23-0#

Jan Libera: So he would consider that information on disease and pesticides are for him the most important during a season? #00:39:30-6#

Sarocho Anukul (Poy): Yes. ...(THAI)... Best practice #00:39:48-1#

Jan Libera: Ah, yeah GAP. #00:39:49-0#

Sarocho Anukul (Poy): The best. #00:39:49-9#

Jan Libera: Is it also Rak Ban Kerd? #00:39:53-0#

Sarocho Anukul (Poy): No, no, no from agriculture ... #00:39:57-8#

Jan Libera: Extension? #00:39:58-5#

Sarocho Anukul (Poy): Yeah, yeah. He face, this years he faces some problem of the water shortage ...(THAI)... but still sufficient. #00:40:31-8#

Jan Libera: Ok. And he also said that he is stopping the export to Europe because of world market price. First of all I would like to know, how does he know? Does the company telling him this is the expected prices and does he consider it as a problem or is he just compensating by exporting more to Asia or selling more here? #00:41:00-5#

Sarocho Anukul (Poy): Step by step? You ask about the price at first? #00:41:07-8#

Jan Libera: Yeah, how he knew about that the world market price now is lower. Is he searching by himself or gets the information? #00:41:15-0#

Sarocho Anukul (Poy): He knows the price from the middleman at Hong Kong, because he export to, into company for the European country and another one in Asia, Hong Kong. So the middleman in Hong Kong told him about the price, world market price. #00:42:56-1#

Jan Libera: And, would he, is he considering a big problem for him that the world market price is lower or is he just saying that he can also make a similar amount of money at least in selling the pomelo in Thailand? #00:43:13-2#

Sarocho Anukul (Poy): Regarding to that, we talk before about the problem in the middle part of Thailand. So the price now is quite high. So it doesn't matter if he cannot export. #00:44:10-6#

Jan Libera: Cannot export, ok. Ok. I think for the agricultural part this would be it. So now the more technical questions about when he purchased his first phone. #00:44:33-4#

Sarocho Anukul (Poy): 2548. Basic phone ...(THAI)... Last year. Around 7000. He spend 400 Baht per month and, 900 Baht per month and almost use only LINE application. #00:46:00-5#

Jan Libera: Was this his first smartphone or did he use before? #00:46:05-7#

Sarocho Anukul (Poy): First one. #00:46:11-8#

Jan Libera: So, because then he is quite new to the smartphones. How was it when he purchased it one year ago. Was it very difficult to get used to it? #00:46:22-7#

Sarocho Anukul (Poy): At first it's quite difficult to get used to it, but now it's quite ok, because his daughter bought to him. #00:46:37-0#

Jan Libera: Ok. So the daughter also taught him? #00:46:40-3#

Sarocho Anukul (Poy): Yes. #00:46:44-1#

Jan Libera: So, what does he think compared to the basic phone? What is the advantage of the smartphone? #00:46:51-5#

Sarocho Anukul (Poy): Contact directly through LINE ...(THAI)... he can picture his product and send to the consumers, so consumer can decide they will order or not. #00:47:38-4#

Jan Libera: Ok. So the consumers contact him by LINE and he can send the pictures? #00:47:43-3#

Sarocho Anukul (Poy): Yes. #00:47:44-2#

Jan Libera: How are the consumers aware of him? Does he promote himself on LINE in somehow or if ...? For example, if I am a consumer how do I reach him, how do I contact him with LINE? #00:47:57-2#

Sarocho Anukul (Poy): His son does the business in the Bangkok, so he can spread out of the contact card. #00:48:46-2#

Jan Libera: Can I take this? #00:48:48-3#

Sarocho Anukul (Poy): Yes. Belongs to his wife, but is ok, we can contact. Her son is doing business about the fresh coffee. About the coffee. #00:49:19-0#

Jan Libera: What kind of fresh coffee you mean? #00:49:21-5#

Sarocho Anukul (Poy): I mean the equipment of ... #00:49:23-5#

Jan Libera: The machines? #00:49:25-0#

Sarocho Anukul (Poy): The machine, yes. #00:49:25-9#

Jan Libera: Ah ok. Nice. Good business I guess. Great. Because now, one step back. When he contacts directly to the consumers, he needs also kind of transportation, infrastructure. Does he have people driving trucks, does he have own people on this one or? #00:49:57-3#

Sarocho Anukul (Poy): He doesn't have a driver man, he just only have the worker in the farm, that's all. And about the, he talk about the, how to transport to the China, he just only like a, he has the middleman to see him and he contact by LINE if, like a, now we have, we already packing, we already transfer to the truck. That's all stuff. #00:51:34-2#

Jan Libera: And the question. When an end-consumer, for example you in Chiang Mai order from him, how do you get the product, how does he send it you? #00:51:46-2#

Sarocho Anukul (Poy): Send ...(THAI)... by post. Sometimes by bus, leave by bus and can send to the address. Deliver, yeah. #00:52:33-7#

Jan Libera: And he only uses LINE for it or does he also include Facebook or the Rak Ban Kerd shop? #00:52:40-6#

Sarocho Anukul (Poy): Only using LINE. #00:52:52-6#

Jan Libera: Ok. So the last part would be about the application itself. I guess, when he bought the smartphone one year ago, was it also one year ago he installed the application? And how did he learn about the service? Did he receive any training? #00:53:10-7#

Sarocho Anukul (Poy): He doesn't use the Farmer Info service, application. #00:53:22-0#

Jan Libera: Ok. #00:53:23-9#

Sarocho Anukul (Poy): Ah, for example, I have the, I am the pomelo farmer who have a problem, so I contact to Rak Ban Kerd foundation. So Rak Ban Kerd foundation call directly to him and then, like a, let him talk to me. I have a problem can I consult with you, something, bla bla bla. That's all. #00:54:35-9#

Jan Libera: So he is not using the application on the phone. Ok. That's not optimal. Yeah. I have just to reconsider any questions I have left. So he is also not interested in using the application? #00:55:03-0#

Sarocho Anukul (Poy): He interesting in using app but none come to train. ...(THAI)... #00:55:58-5#

Jan Libera: And if he is interested in the app, what would he, what is he expecting the app would help him with? #00:56:07-7#

Sarocho Anukul (Poy): He is expecting for the exchanging the knowledge, like a, he knows something and he can try to publish to other farmers. ...(THAI)... What would you like to ask? #00:57:38-9#

Jan Libera: If he would install an app, is it only about sharing the knowledge or would it be also important for him to know the prices for the product, weather, any other information. Not only by other farmers but also by companies. #00:57:59-5#

Sarocho Anukul (Poy): Not, not. He doesn't think it is important to #00:58:27-9#

Jan Libera: To know about? #00:58:28-0#

Sarocho Anukul (Poy): Yes. #00:58:30-0#

Jan Libera: What? #00:58:31-2#

Sarocho Anukul (Poy): About the price and the weather. Good then. If he know is good, but if he doesn't it's ok. #00:58:48-8#

Jan Libera: And, just one last question. If he would receive information, about new agricultural practices or on how to use fertilizer or any of these things, how would he like to have it? Would he prefer to have it like a text, where he can read it, instructed pictures, video, audio file, audio file, like someone explaining it just by reading? #00:59:18-9#

Sarocho Anukul (Poy): The picture with the description would be better. #01:00:01-7#

Jan Libera: Ok. So, as he is not using the app, I think I am running out of questions. So just thank him for his time and it was very interesting to learn about his export.

APPENDIX 7: Interview with Farmer Three

The last interview with a farmer was conducted on the 6th of June during my round trip in Chiang Rai province. The interview was conducted at the farmers house and started

right away. The farmer was also part of the pre-test group for the survey among the app-users which was conducted in January 2016, #00:00:00-3#

Jan Libera: Maybe introduce ourselves again. Tell what we do. Why we also came here, after we did the pre-test with him before and then explain how we structure the interview. #00:00:12-4#

Sarocho Anukul (Poy): #00:00:54-3#

Jan Libera: So the first part would be again the personal introduction. Name, age, educational background, also the income, what he gets from the farm and if he lived here for his whole life, how long he has been in agriculture. #00:01:12-1#

Sarocho Anukul (Poy): He was born here and his age around 59 ...(THAI)... rice field around 12 rai ..(THAI)... he does the only rice, two crops per year. #00:02:17-3#

Jan Libera: Ok. Two harvests? #00:02:20-0#

Sarocho Anukul (Poy): Yeah, two harvest. Only rice and some crop in this area, in the house area. #00:02:28-2#

Jan Libera: So like home garden, vegetables. #00:02:29-7#

Sarocho Anukul (Poy): He got 150 000 per year for two harvests ...(THAI)... around 8-9 000 for the home garden. #00:03:22-6#

Jan Libera: Ok, so it's not only for home consumption but he also sales. #00:03:33-2#

Sarocho Anukul (Poy): He lives with his wife and his nice or nephew. ...(THAI)... Is not the Bachelor but kind of. #00:04:17-6#

Jan Libera: It's university degree or? #00:04:19-6#

Sarocho Anukul (Poy): You say "Ausbildung" that the for the, for professional in some way. #00:04:29-2#

Jan Libera: Like a certificate? #00:04:29-7#

Sarocho Anukul (Poy): Yeah, certificate on something. I will search the name. #00:04:34-9#

Jan Libera: So it's a little bit more than high school but less than a bachelor. Ok. Then back to the rice, how ... #00:04:44-1#

Sarocho Anukul (Poy): He went back to do agriculture like ten years, 14 years ago. #00:05:09-0#

Jan Libera: Ok. And what did he do before? #00:05:11-8#

Sarocho Anukul (Poy): Ah. Bank ...(THAI)... ah, KBank, Green Bank. #00:05:21-3#

Jan Libera: What was the reason for him to go back to agriculture? #00:05:26-2#

Sarocho Anukul (Poy): He's bored. He worked at bank cooperation like for 30 year. So he quite bore, so he went back to do agriculture. #00:05:47-0#

Jan Libera: And had he agricultural knowledge before or was it completely new for him? #00:05:51-6#

Sarocho Anukul (Poy): He has experience before, because his parents were doing agriculture. #00:06:19-8#

Jan Libera: Ok. And the whole land he has, was it bought by him from savings from his work in the bank or was it family owned? #00:06:30-1#

Sarocho Anukul (Poy): Yeah, it comes from his parents, but for the, this house, he bought. #00:06:50-5#

Jan Libera: And does he regard to go back to agriculture or is he still happy? #00:06:57-3#

Sarocho Anukul (Poy): Happy here ...(THAI)...his own like a, he has own business, he has no, like a, go to be employee. #00:07:31-5#

Jan Libera: Yes, self... or independent. And also shortly for the bank. It was in Chiang Rai or was he working in Bangkok or? #00:07:41-6#

Sarocho Anukul (Poy): At first he work in Bangkok, the big one and then he moved to Chiang Rai and then come here. #00:07:59-0#

Jan Libera: Maybe it's a bit inappropriate to ask, but how high was he in the bank? Was it a management level or? #00:08:06-8#

Sarocho Anukul (Poy): Marketing, äh, loan, he work with loan. ...(THAI)... In the past working in the bank, like a, should do everything is not like separate the part. He can do. #00:08:56-2#

Jan Libera: So he was responsible for more. #00:08:59-3#

Sarocho Anukul (Poy): But mainly for loan. #00:09:01-3#

Jan Libera: And does he think that there is experience from the time as a banker helping him to be a farmer in, I don't know, any aspects from this time? #00:09:13-8#

Sarocho Anukul (Poy): No relation but he knows the market. He can analyse the market demand. #00:09:42-5#

Jan Libera: And also is he trying to get loans from banks for his fields or his maybe compared to other farmers saving money in a different way, if he thinks about it? That this is influencing from his bank time? #00:10:00-1#

Sarocho Anukul (Poy): He can give a suggestion to the other farmer but for him, he doesn't want to lent the money. ...(THAI)... good that he never ...(THAI)... because he thinks he quite old and he just protect himself. #00:11:16-4#

Jan Libera: Understandable. What is he trying to do with the farm later? Does he want to pass it on the family or? #00:11:26-0#

Sarocho Anukul (Poy): He tends to give to his child but it depends on his child. #00:11:59-3#

Jan Libera: If they want or not. Ok. Back to questions. He already said that he can analyse the market due to his banking experience. What are his marketing channels? First of course for the rice, but also for the homegrown vegetables. #00:12:18-7#

Sarocho Anukul (Poy): For rice, over the past two year, I mean this two year, after the military government comes, they have no, like a, policy to support the farmer, rice farmer. So he has to take all of the rice by himself, like a, he has to go the mill and sell. Sometimes he lost, sometimes he get more benefit, but it not quite ... #00:14:06-7#

Jan Libera: Stable? #00:14:07-8#

Sarocho Anukul (Poy): Yeah stable. So for the, in home garden, he quite happy a lot, because it's, he sell at the local market and seems not enough. #00:14:19-8#

Jan Libera: It seems not enough or enough? #00:14:22-9#

Sarocho Anukul (Poy): Is not enough for the market, he has to #00:14:25-2#

Jan Libera: Ah he, ok, the production is ... #00:14:26-6#

Sarocho Anukul (Poy): produce more, yeah. #00:14:28-2#

Jan Libera: ..too low. He wants to produce more home garden. Is he thinking, because it seems the market over the last two years was pretty bad for rice for him. Does he think about changing, because he now sees that vegetables are more profitable? Is he thinking about converting some of his land? #00:14:49-8#

Sarocho Anukul (Poy): Ah, he already grow something on the rice field. During non-harvesting time, I mean, and he has a small pond in the field too. #00:15:46-7#

Jan Libera: And what is he growing on the rice field? #00:15:51-2#

Sarocho Anukul (Poy): Like a fruit. Mango, coconut and banana. ...(THAI)... #00:16:26-4#

Jan Libera: On the side of the field? #00:16:28-1#

Sarocho Anukul (Poy): Yeah, on the side of the field ...(THAI)... he has two small pond and grow the something on the side of the field. #00:16:42-1#

Jan Libera: Is he a member of any organization or the royal project? #00:16:49-2#

Sarocho Anukul (Poy): He, like a, construct the group, like organic vegetable group #00:17:25-5#

Jan Libera: So, he started it or? #00:17:28-2#

Sarocho Anukul (Poy): Yeah, he is the starter, but for now, he not related to that quite much, he got quite old. The group not certain, I mean not in the pack. #00:17:47-4#

Jan Libera: But he started the group for organic vegetables. But now they have, like a problem to come in a group or stick together? What was the idea when he started the group, what was the idea behind it? #00:18:04-1#

Sarocho Anukul (Poy): At first he concerning about the health and the child's health. So he just, and at that day, I mean, the chemical is quite, is a big problem. So he thinks is, it should be changed. #00:19:04-3#

Jan Libera: But more for the personal reason, because he was ... #00:19:08-6#

Sarocho Anukul (Poy): First, firstly come from personal reason. #00:19:11-7#

Jan Libera: Ok. So, when he is preparing his fields with pesticides, fertilizers, what is housing for his rice field and his home garden? #00:19:23-6#

Sarocho Anukul (Poy): He, totally use organic. At first he has like a his own factory to produce the bio, organic fertilizer ...(THAI)... but is closed ...(THAI)... the reason why he closed the factory, because of, first is the cost was too high and the next generation would not interest in the organic fertilizer, they want to use chemical. Because it can see suddenly the insect was die. And because of his group was loose now, so, no reason to continue the factory. #00:21:41-6#

Jan Libera: So he thinks that the younger generation of the farmers is looking more into chemicals than the organic one? #00:21:49-8#

Sarocho Anukul (Poy): Yes. #00:21:59-1#

Jan Libera: So, what does organic agriculture mean for him? Is it only because of the personal health, is it for the health of everyone, is he thinking about a higher market price, better soil quality? What aspects are important for him? #00:22:25-4#

Sarocho Anukul (Poy): He get a higher price from organic. So he told me about the contact to like a hospital, so the hospital will set the point to sell and he can sell. So the

consumer will like, more like believe on him. And then, sometimes the consumer go through this way and they just come to sell on field. #00:25:09-8#

Jan Libera: Ok. So, he is really, like also when he sales he is claiming organic. He is promoting his vegetables. And can you ask him, what he gets for the organic compared to the market, for example, like ...? #00:25:29-2#

Sarocho Anukul (Poy): Two Baht higher? #00:25:30-7#

Jan Libera: He said 2 Baht or? #00:25:33-1#

Sarocho Anukul (Poy): Around 10%, if we count in percentage ...(THAI)... but he said, that the strength of his product is like a, he can sell all of the product. Nothing left. #00:26:15-3#

Jan Libera: And the organic, also includes the rice? #00:26:18-5#

Sarocho Anukul (Poy): He separates into two product. If he consume by himself, he use organic. But if he has to sell to the mill, he need to use some chemical. #00:26:47-5#

Jan Libera: For what reason? #00:26:50-2#

Sarocho Anukul (Poy): Fertilizer. #00:26:57-0#

Jan Libera: Did he also try, because he says that with the vegetables he can more or less sell all his vegetables and consumers respect that its organic. Did he ever try with the rice? #00:27:10-1#

Sarocho Anukul (Poy): He claim that he cannot do that because of the, if he does rice, organic rice, he will, he has a lot of the cost in like a silo, I mean, because he has to

control all the thing to be organic way. So, he expect that the price will be higher and the consumer will willing to buy, but for the management the ... #00:29:13-2#

Jan Libera: Cost would be higher? #00:29:13-6#

Sarocho Anukul (Poy): Yeah, the cost would be high. And moreover, because of his scale of the field, the farm, quite small, only 12 rai. If he has like a big scale, large scale of that, he think he can do. #00:29:37-5#

Jan Libera: Then what are his problems or what are the problems he faces during a season? And which of the problems he considers as the main problems or the problems with the biggest impacts for him? #00:29:55-1#

Sarocho Anukul (Poy): Ah, labour. ...(THAI)... Not enough ...(THAI)... He told that, because of the young generation would like to go to the city, work in the office, so the age of the farmer would be like higher than 40. This is a problem that he claim. #00:31:10-0#

Jan Libera: And, how is he managing the labour right now? Is it mainly him and his family or does he bring in some labour from outside? #00:31:22-8#

Sarocho Anukul (Poy): He can do by his own for the home garden, but for the rice field he has to hire for machinery, like plough, something. and on the harvest season he has to hire the people in this area to harvest the rice. #00:32:21-4#

Jan Libera: And he said, that the young generation is leaving the area. Do you think... Or what is his idea how could it be more attractive to stay here or does he think the young generation will come back? Or what he sees in the future for this part? Because otherwise at the end only old people will live here. #00:32:46-2#

Sarocho Anukul (Poy): He said it's difficult. Only one word: difficult ...(THAI)... he claim also about the university, the agriculture university. It quite close a lot. I am not

sure about that, because I think, in my opinion still have some university, but he ...
#00:33:42-8#

Jan Libera: Ah, he says the university, the agricultural ones close down? #00:33:48-3#

Sarocho Anukul (Poy): Yes. ...(THAI)... also the practical centre, also close, because no one interesting in ...(THAI)... he claim about the economy, the world economy. Last time that Thailand faced the problem in the financial problem, so people will come to hometown to do agriculture, because they have no work in the big city. And then after the crisis, the economy will better, so people go again to the city. #00:34:59-6#

Jan Libera: Ok. Does he have any idea what could be done to make agriculture more attractive to younger people and not only during a poor economic development, but for a long-term, that they are coming back. In his opinion is there anything might be helpful to bring them back? #00:35:30-3#

Sarocho Anukul (Poy): Enhance, improve the agriculture. Something like irrigation, give the knowledge, like a promotion, promote. #00:36:14-9#

Jan Libera: Promote agriculture more with the young's. And does he has any other problems than labour during a season? We heard before pest, disease often a concern, water shortage, anything other than labour? #00:36:40-6#

Sarocho Anukul (Poy): Talking about the disease. He said, he didn't apply the pesticide for kill, just to protect, so that the insect would not come to his field. Some kind of this and I will ask him ...(THAI)... Water shortage. Water shortage in agriculture part, but for home consumption is still enough. #00:37:37-2#

Jan Libera: And for the water shortage, you can also ask, is it yearly action or is it just recently because of the drought in Thailand? Or does he face it in a normal season? #00:37:55-5#

Sarocho Anukul (Poy): He said that Thailand has no good irrigation, some kind of reservoir, because of he said it depend on only rain fed. #00:38:41-5#

Jan Libera: So he is facing it more or less every year. #00:38:43-9#

Sarocho Anukul (Poy): Yeah, every year. #00:38:47-8#

Jan Libera: Ok. Did he say anything else for problems he has or? #00:38:55-5#

Sarocho Anukul (Poy): Price stability. That's why the young generation does not interested. #00:39:20-5#

Jan Libera: Does he see a lot of price fluctuation over time since he worked here? #00:39:25-9#

Sarocho Anukul (Poy): Since he work in agriculture? #00:39:28-3#

Jan Libera: Yeah. #00:39:29-7#

Sarocho Anukul (Poy): A lot. He does not want to touch the politics, but it relate to. #00:39:58-3#

Jan Libera: But the fluctuation mainly for the rice or, and the vegetable are more stable or is it for both? #00:40:07-4#

Sarocho Anukul (Poy): Everything. ...(THAI)... He cannot negotiate with the like a big middleman, he cannot negotiate. #00:40:51-8#

Jan Libera: But when he grows the vegetables because it is also on a smaller scale, does he think that because he has organic products, it protects him in some way from this fluctuation because normally as he said, the price is higher anyway. And maybe the consumer is also more stable. That the one who is consuming organic will always go for the organic ones? #00:41:22-4#

Sarocho Anukul (Poy): Yeah, quite stable. ...(THAI)... He can say that the reason why he is stable now here is more or less for the vegetable. #00:42:10-8#

Jan Libera: Did he ever consider to do more organic vegetable and start providing like supermarkets, restaurants, businesses, because especially when you see the bigger supermarkets, like RimPing, Tops, they always have Pesticide-Free, Organic ones promoting them. #00:42:29-7#

Sarocho Anukul (Poy): He has tried once with his group to sell to Big C supermarket. But is not success because of the condition with the supermarket was too high. The supermarket requires a lot of thing that he cannot do like some kind of the quantity. He tried to do like a the big amount, the large amount of the vegetable but he cannot, they cannot do, because the group is quite small. And he also lost his money. So he thinks it's not worth to do. #00:44:49-4#

Jan Libera: He prefers sticking with the local market. And then the last part for the agricultural would be about the information. He mentioned some problems like water shortage and all this, but what is for him the most important information? Is it information about water availability or where he can get cheap labour or information about pest and disease, good seed? What information from the cultivation till the selling point are most important for him and how does he normally get the information? #00:45:36-5#

Sarocho Anukul (Poy): Quite long na, but I try. He claim that, because of the, the problem is the government officer. They have like a small amount compared to the farmer in this area and they don't work like a professional. They cannot give them everything the farmer want. He has to go to search for himself, like application, like from the book, from the internet and newspaper, I think the magazine. He has to go for himself. But for the government officer it's not good. #00:48:11-3#

Jan Libera: Because no enough, no professional work? #00:48:13-9#

Sarocho Anukul (Poy): Yeah, and less knowledge. #00:48:20-2#

Jan Libera: And does he also travels to get information or, for example to see his input dealer about seeds or organic fertilizer or attending meeting? Because he needs the information to search for himself, does he has to travel or spend a lot of money to get the information? #00:48:46-3#

Sarocho Anukul (Poy): At first he went to attend the meeting something , almost every month as he can, and he spend the money in like a for the accommodation and the for meal only and he thinks it's worth to do to spend the money for that. But for now he more or less, he want to stop the agriculture, because he is quite old, so he wants to rest. So now for the joining the meeting, he will think about it. #00:50:25-0#

Jan Libera: So he wants his family to take over the business? #00:50:30-2#

Sarocho Anukul (Poy): Not take over, na ...(THAI)... I mean he didn't like to stop the agricultural part but stop for going somewhere to get the knowledge. But he will do, still doing the agriculture. #00:51:07-0#

Jan Libera: And when he has to estimated, when he attend all the meetings every month, how much time it took him and how much money he spend approximately, he would say? #00:51:17-2#

Sarocho Anukul (Poy): It's depend on the area if he goes far he spend around 1 000 or 2 000 Baht, around 1 000. But if like in the city, he can go like spend no money. For the government meeting he spend like a one day, but for the private organization is spend like one day and one night. #00:52:45-6#

Jan Libera: Was there a particular time when there were more meetings, for example you have ... #00:52:49-4#

Sarocho Anukul (Poy): In the weekend or something? #00:52:50-4#

Jan Libera: No, you have like one season, normally the season starts with the before cultivation about seeds and all this, then you have the cultivation time, then you have the harvesting time and then post-harvest time. During any of these times was there a particular focus on meetings with particular information? #00:53:17-8#

Sarocho Anukul (Poy): Before harvest. This for private organization, but for the government is like after harvest. ...(THAI)... and for like the professional, will ask the need of the farmer first and will manage the meeting later. #00:54:10-8#

Jan Libera: Ok. So I think one last question for the agriculture and then the phone part. The last question for the agricultural part would be: Does he has any problems for post-harvest after harvest with any of his products? For example rice, if he stores it too long, that spoilage occurs or he loses some of his harvest? #00:54:42-4#

Sarocho Anukul (Poy): He said no because he taking good care of it. #00:55:15-6#

Jan Libera: Ok. So the agricultural part would be ready. For the phones again the three standard questions, when he purchased, I think he gave me the answers the last time, it's just for the record, that when purchased his first mobile phone, when did he purchase his first smartphone and how much he spend on his last phone? #00:55:41-1#

Sarocho Anukul (Poy): Almost 30 years ago. Almost 2 year. #00:56:18-0#

Jan Libera: The first smartphone 2 years ago? #00:56:21-1#

Sarocho Anukul (Poy): Or 4 or 5 year. #00:56:40-6#

Jan Libera: And on his last smartphone, how much did he spend on it? #00:56:43-1#

Sarocho Anukul (Poy): Almost 5 000 ...(THAI)... around 800 Baht per month. He use the internet since then, before this device. #00:57:33-7#

Jan Libera: So also around 4-5 years. #00:57:35-9#

Sarocho Anukul (Poy): Yeah 4-5 year for smartphone. #00:57:38-3#

Jan Libera: And what he thinks about, when he got his first smartphone? How easy was it to learn, how difficult and also was compared to the basic phone the most important improvement? #00:58:04-2#

Sarocho Anukul (Poy): He talking about the touchscreen, at first is quite difficult to use, but for now it's quite easy, better than the basic phone. You can search the internet through this phone. #00:58:58-7#

Jan Libera: So for him internet is the most important part compared to a basic phone? #00:59:07-6#

Sarocho Anukul (Poy): Yes. ...(THAI)... #00:59:33-6#

Jan Libera: And how often does he use the smartphone per day? #00:59:43-0#

Sarocho Anukul (Poy): 2 hours approximately. #01:00:13-3#

Jan Libera: Ok. Now for the last part. This would be about the application. Again since when he is using the application, how he learned about this application and if he received any training and how often he uses? #01:00:31-8#

Sarocho Anukul (Poy): Since one year, one year late. Because is, from this phone ...(THAI)... Yeah, he got training ...(THAI)... How often, like a, he woke up in the morning and check some, like a 30 minutes. #01:01:35-7#

Jan Libera: On the application? #01:01:37-5#

Sarocho Anukul (Poy): On the application ...(THAI)... ah, not all 30 minutes, some, yeah ... #01:01:56-1#

Jan Libera: He is just checking his phone 30 minutes and this includes also the Farmer Info? #01:02:02-8#

Sarocho Anukul (Poy): Yes. And in the evening, before he go to bed, like a, one and a half hour, some, same. #01:02:10-2#

Jan Libera: So, he is playing with the phone and then he has the app too and he is checking it from time to time? #01:02:15-4#

Sarocho Anukul (Poy): Yes. ...(THAI)...He said the application give him no more than two news per day, so he just only check in the morning and then in the evening ...(THAI)... he used to ... #01:02:47-0#

Jan Libera: he used the SMS-service? #01:02:49-1#

Sarocho Anukul (Poy): Yeah. #01:02:51-0#

Jan Libera: And now the question is, compare the SMS-service with the application. What is better and how it changed for him from the SMS-service to the application? #01:03:03-2#

Sarocho Anukul (Poy): Ah, for the app it's more comfortable ...(THAI)... he can contact through it directly and continuously. #01:03:44-9#

Jan Libera: So, did he also ever use the helpline for call to dtac? #01:03:52-3#

Sarocho Anukul (Poy): Ah, often. ...(THAI)... is about the asking for the bill, pay bill. #01:04:25-2#

Jan Libera: Ah, but not for ... #01:04:26-7#

Sarocho Anukul (Poy): not for agriculture ...(THAI)... not for agriculture ...(THAI)... he think it doesn't have the helpline. He think it doesn't have the helpline, so he will not use the helpline. #01:04:54-8#

Jan Libera: So he is not aware of it? #01:04:55-9#

Sarocho Anukul (Poy): Yeah. ...(THAI)... never use the helpline, even to call to Rak Ban Kerd. #01:05:18-3#

Jan Libera: Yeah, when I sometimes, when I use dtac and Rak Ban Kerd, I mix it up. So of course I mean the helpline from Rak Ban Kerd. #01:05:25-8#

Sarocho Anukul (Poy): Yeah, ok. #01:05:25-4#

Jan Libera: And, what in the application is the most helpful for him? Is it the agricultural news, the price, the videos, the online marketing platform? #01:05:39-1#

Sarocho Anukul (Poy): Video, quick. Because he can see the picture and it's quite a variety. #01:06:09-4#

Jan Libera: And, can he give any example where a video directly impacted or affected his practices or a video which really changed anything in his behaviour? #01:06:28-3#

Sarocho Anukul (Poy): Ah, ok. He more interested in the like a machinery. Like a the new innovation that can help him. And for the clip, he just like a, what he is interested, he just wrote down in the book and then he kept it with himself and wait like a, yeah, one day he can use it in one day. #01:08:04-1#

Jan Libera: Did he ever use the things he wrote down? #01:08:08-9#

Sarocho Anukul (Poy): Nah, not yet. ...(THAI)... Because of the area limited. I mean the area is quite limit, so some kind of the machinery cannot use in this case.

...(THAI)...He can suggest, give the suggestion to another farmer. Like he know something about poultry, he wrote down about the ingredients or how to raise the poultry and give this to another farmer who raise the poultry. #01:09:27-2#

Jan Libera: So, do the farmer also approach him? Do they know that he has kind of a manual, a book, because he watches the video and the farmer come to him and ask him if he has any advice on it? Or is it more that when he sits together with another farmer, they are just chatting and he gives some advice? #01:09:46-8#

Sarocho Anukul (Poy): Just sitting and ... #01:09:57-1#

Jan Libera: Talking? #01:09:59-8#

Sarocho Anukul (Poy): And talk, yeah ...(THAI)... Because the other farmer never use the dtac service before. They use like AIS service instead. #01:10:20-3#

Jan Libera: But for himself, he never really used one of the suggestions or ideas from the videos. #01:10:26-2#

Sarocho Anukul (Poy): No. #01:10:27-1#

Jan Libera: Ok. And because he mentioned, how is he thinking about the reception service in here? #01:10:34-1#

Sarocho Anukul (Poy): You mean for Rak Ban Kerd? #01:10:35-6#

Jan Libera: No for, because he uses dtac, how is the reception here? Is he happy? Because he says that most of the other farmers use AIS, what about dtac and the service around? #01:10:46-3#

Sarocho Anukul (Poy): Ok. The reason why the AIS user didn't change to the dtac service, because of the condition, when you want to change another service. Yeah, it takes 3 day for it. So it not change directly, suddenly. #01:11:35-7#

Jan Libera: So, means AIS doesn't have the better services, just they don't want to change, they started with AIS. And because it takes 3 days they don't change? #01:11:45-9#

Sarocho Anukul (Poy): Yes. #01:11:47-2#

Jan Libera: Ok. And did he ever use the price checking tool? Or, to see for example for the rice in particular, where to sell the rice to, to get a higher price? Or also... #01:12:05-7#

Sarocho Anukul (Poy): Through the app? #01:12:06-4#

Jan Libera: Yeah, through the app. Or also maybe for his vegetables? If he sees that he can sell it at the Chiang Rai market higher than he sells at the local village market? #01:12:15-8#

Sarocho Anukul (Poy): Yeah, he check, but the product is not enough to, to go to sell in the somewhere else. Because he quite, he don't want to move to somewhere else, I mean he quite old, so just only sell in the market, local market is enough for him. #01:13:37-4#

Jan Libera: And, when he says he doesn't want to sell it somewhere else, there is always the possibility of online marketing, like what we said yesterday with the pomelo producer, the distribution via LINE, he can distribute via Facebook or even the Rak Ban Kerd online shop. Does he consider this? Especially for organic vegetable, Thai people are more health conscious, so he might have a consumer base on this part. #01:14:12-1#

Sarocho Anukul (Poy): Ok. Ah. he said about, he, is the plan to do like, the home garden. He will grow the vegetable and will do like supermarket, like a people, the consumer can come to this place and collect by themselves and just give him money. And he will promote this business by Facebook. He will do, it's just a plan and he tend to do it. #01:15:50-1#

Jan Libera: Is he? How happy or how, not well educated is maybe the wrong word, but is he confident with working online on Facebook or is he more depending on his nice or the younger generation? #01:16:07-8#

Sarocho Anukul (Poy): Depends on his. ...(THAI)...His child help a lot. #01:16:37-0#

Jan Libera: Also with the smartphone and the application? #01:16:40-2#

Sarocho Anukul (Poy): Yes. #01:16:43-0#

Jan Libera: And. The idea of people coming to his farm and doing the harvest by themselves, maybe you can tell me, is it usual in Thailand that people do this? #01:16:58-4#

Sarocho Anukul (Poy): It's not quite usual. #01:16:57-8#

Jan Libera: Ok then, can you ask him? Because in Germany, there #01:17:03-1#

Sarocho Anukul (Poy): Quite usual? #01:17:05-2#

Jan Libera: No quite usual, but for strawberries, flowers. #01:17:07-6#

Sarocho Anukul (Poy): Yeah, for strawberry in Chiang Mai also have that. #01:17:11-6#

Jan Libera: Ok. Can you ask him how he came up with the idea to do it with the vegetables? #01:17:16-0#

Sarocho Anukul (Poy): That's cute. He said about that, if we go to the market and we saw the bunch of the vegetable and sometimes we don't like the all the bunch of the vegetable. So just came to here and pick up the enough amount, I mean the amount you would like to do the, be the vegetable. #01:18:18-8#

Jan Libera: Ok. That's a good idea. #01:18:20-4#

Sarocho Anukul (Poy): Yeah, it's come with himself, by himself. #01:18:24-5#

Jan Libera: And, just for the marketing, how he thinks to price it? #01:18:32-0#

Sarocho Anukul (Poy): You mean? You mean price when... #01:18:35-1#

Jan Libera: When the people come. Is it more on a voluntary base like they take 5 tomatoes and they say ok 5 tomatoes are worth 10 Baht or does he say this are the prices? #01:18:49-2#

Sarocho Anukul (Poy): He said like a everything, everything 25 Baht per kilogram. He said, some kind of, this is ... #01:19:28-6#

Jan Libera: Fixed price? #01:19:28-7#

Sarocho Anukul (Poy): just an idea, you can like an if you take 5 piece of the ...(THAI)... like a I pick up the 5 chili and then 5 lime and another vegetable, so it make in 1 kilogram 25 Baht. #01:20:00-7#

Jan Libera: Oh. That's a good. #01:20:02-2#

Sarocho Anukul (Poy): Cute na? #01:20:03-2#

Jan Libera: It's a good idea and he saves the labour to harvest. Ok then, maybe the last question for the interview. Because he is now used to the app and he works on it and checks it. Did he realize that there is anything missing any kind of information he would like to receive on the application or things he maybe wants to change in the application? Like, when he would be now responsible for making the next development step, what would he do else? #01:20:36-5#

Sarocho Anukul (Poy): Frequently, Mean, the news, the information. #01:21:24-7#

Jan Libera: More frequently? #01:21:27-9#

Sarocho Anukul (Poy): Yeah. Because he claim about that two news per day ...(THAI)... should be more than two ...(THAI)... he want to read through it continuously, so it should be more than two. It's around 5 or 6 it would be perfect. #01:22:04-0#

Jan Libera: And the form of information he is happy it or he would also change the focus of the information? #01:22:12-6#

Sarocho Anukul (Poy): Yeah, it's ok. #01:22:26-3#

Jan Libera: And, maybe last part, because he is engaged in organic agriculture. Does he think the application provides information for organic farmers and also highlights the positive effects and on not only the producer's health but also the consumer's health, so that more people in Thailand might to change to organic? #01:22:50-7#

Sarocho Anukul (Poy): You mean from the app? ...(THAI)... he base on, because he base on the organic, so the information is more familiar with the. It's quite similar to his way already but he can adjust something, because something is new and he might think about that, yeah. #01:23:48-3#

Jan Libera: But he thinks that the information concerning organic is enough and might also lead that other farmers will adopt the practices? Is it also understandable in the videos? #01:24:00-5#

Sarocho Anukul (Poy): Understand. #01:24:13-4#

Jan Libera: Easy to understand? #01:24:14-1#

Sarocho Anukul (Poy): Yeah. And other farmer will understand too, he said. #01:24:21-1#

Jan Libera: Ok. Did he ever contributed to the application in form that Rak Ban Kerd did a video here? Because I know that they look for farmers and make videos with them to explain to other farmers. Did they ever approach him? #01:24:34-8#

Sarocho Anukul (Poy): Since the Rak Ban Kerd has the radio channel, they came here to ask for the information from him. Like, I mean, in this case like a share their information together. #01:25:03-4#

Jan Libera: ok. But only for the radio station, not videos? #01:25:07-2#

Sarocho Anukul (Poy): For now is no ...(THAI)... for now is no, but in the past, yeah. #01:25:19-5#

Jan Libera: So he did radio and video? #01:25:22-5#

Sarocho Anukul (Poy): Both. #01:25:32-4#

Jan Libera: Ok. So, ok. Great. Thanks to him and the only last question I have is, if he wants to add anything else, if he wants to give me any other information he thinks it's important, anything he should, would say dtac should do in a different way, Rak Ban

Kerd should do in a different way. He is now free talk and anything he wants ...
#01:25:59-5#

Sarocho Anukul (Poy): No, nothing ...(THAI)... ah, he doesn't find a problem with that. #01:26:36-9#

Jan Libera: Thank you very much.

APPENDIX 8 – CSR Promotion Video of dtac

- 1 Thai Song

- 2 Chompoothip, Muangjai (Head of small community enterprise, Compoo District): All this time, I had decided that it was time to come back to my hometown Chiang Mai. Here I met my uncle and aunt and saw the way they lived. They wanted me to help them with any suggestions or inputs. Once the group was formed, I wanted the group to grow. It wasn't enough to sell rice only. There were a lot of farmers I had to help find markets for their products. So I was worried and didn't know what I was going to do.

- 3 Angkoon, Korcharoenchai (Assistant of small community enterprise, Chompoo District): We acknowledge problems that most farmers had, that is, there was no place for farmers to sell their products. So we should join as a group under one objective.

- 4 Thongpiean, Sitthitham (Secretary of integrated farming group, Tha Kwang District): The selling wasn't so well back then. Some days I collected the produce but couldn't sell it.

- 5 Bhunyang, Sitthitham (Head of integrated farming group, Tha Kwang District): Sometimes they declined to buy our products, saying it was done today.

- 6 CONNECT THE UNCONNECTED - CONNECT FOR SMART FARMER

- 7 "Tip" (dtac Internet Volunteer): We saw a lot of problems in every part of Chiang Mai. they didn't understand what smartphone is. It was difficult for us to teach them how to use the internet.

- 8 Aunty, Lumduan (member of small community enterprise, Chompoo District): I didn't see any use of it, this smartphone.

- 9 Tawil, Na Soontorn (Head of Organic Farming, Sarapho District): I didn't get it at first. All we knew was just a regular mobile phone.

- 10 Aunty, Aoy (Farmer, Sarapho District): I didn't know how to use the phone or Internet, until the dtac Internet Volunteer team came to help.

- 11 "May" (dtac Internet Volunteer): At first, they didn't believe in us so we tried to get

involved in their everyday lives as we were part of them, as if they were our families ... so often that they got bored with us.

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- 12 "Dew" (dtac Internet Volunteer): Most of the farmers were not interested in joining as a group. They often met once a month, but more like a group off family. We, volunteers, were here to teach and help. We did it all for the farmers.
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- 13 Aunty, Lumduan (member of small community enterprise, Chompoo District): It was difficult at first but later on when I gave it a try, it turned out not as hard as I thought.
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- 14 "Kwun" (dtac Internet Volunteer): It was difficult to teach them. All we did was to keep visiting them until they began to get used to it.
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- 15 Bhunyang, Sitthitham (Head of integrated farming group, Tha Kwang District): Press the red button here, the green one there. I've become better at it.
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- 16 Tawil, Na Soontorn (Head of Organic Farming, Sarapho District): When I want to answer calls, I'll prefer to the button looking like a buffalo horn. And if I want to take photos, I will use a gear wheel symbol.
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- 17 "Kwun" (dtac Internet Volunteer): Sometimes they call us to ask. They use their phones so often that they want to keep using it.
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- 18 Aunty, Aoy (Farmer, Sarapho District): Angkoon, Korcharoenchai (Assistant of small community enterprise, Chompoo District): I asked a lot. They probably felt annoyed. But I'll ask until I know how to use it.
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- 19 "Mek" (dtac Internet Volunteer): She likes to use Line. It makes her happy. She sells Chomjun flowers for living. She'll take photos and send them to her customers.
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- 20 Thongpiean, Sitthitham (Secretary of integrated farming group, Tha Kwang District): After collecting Chomjun flowers, I take photos and send them to my customers, then I will get orders from them.
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- 21 Angkoon, Korcharoenchai (Assistant of small community enterprise, Chompoo District): We had trouble dealing with social network marketing. Luckily, the dtac Internet Volunteer team came in to help us with how to do marketing on Facebook, which was something we wanted to do, but never had a chance.
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- 22 Lynda, Wangvanich (AVP - Prepaid Special Special Segment): As for dtac, we have an application called "FARMER INFO". It's such a simple app, which answers all needs of farmers. In the application, you will see functions like product pricing and estimate cost. Farmers can access a lot of information on the app so they can further their knowledge and so on.
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- 23 Chompoothip, Muangjai (Head of small community enterprise, Chompoo District): Farmers and villagers are learning to smartphones and applications to communicate. Our group has used it to sell our products and made their way to Bangkok.
-
- 24 Tawil, Na Soontorn (Head of Organic Farming, Sarapho District): Now we take
-

photos of our products and send them through Line. Customers see what they want and order ... very useful indeed.

-
- 25 Bhunyang, Sitthitham (Head of integrated farming group, Tha Kwang District): Anything I want to know like price difference ... I can just compare the price on smartphone.
-
- 26 Aunty, Lumduan (member of small community enterprise, Chompoo District): With this, it's easy to get weather forecast updates.
-
- 27 "May" (dtac Internet Volunteer): The FARMER INFO application shows current selling price of rice, helping them to improve their sales.
-
- 28 Thongpiean, Sitthitham (Secretary of integrated farming group, Tha Kwang District): I'm proud of having it. It makes me happy.
-
- 29 Angkoon, Korcharoenchai (Assistant of small community enterprise, Chompoo District): All and all, we get benefits of using the Internet. It helps us widen distribution channels. So I'm feeling happy
-
- 30 Chompoothip, Muangjai (Head of small community enterprise, Chompoo District): Thank you for helping farmers find ways to sell products. You guys have made our community very happy.
-
- 31 "May" (dtac Internet Volunteer): I feel glad to help farmers, to support and have made their lives better.
-
- 32 "Tip" (dtac Internet Volunteer): The response is overwhelming. I still couldn't believe it. I feel so pleased.
-
- 33 CONNECT THE UNCONNECTED
-

APPENDIX 9 – Social Media Content & Success Stories

1. Google Play Store

1. ดีครับ แต่ต้องเป็นลูกค้า dtac เท่านั้น ทำทั้งทีน่าจะใจกว้างกว่านี้ครับ

Good but only for DTAC customers. They should be more generous.

2. ทำเพื่อเกษตรกร หรือทำให้ลูกค้าDTAC An other green wash CSR App! For the farmers or for their customers

3. มีน้อย There are a few applications.

4. ทำเพื่อสังคม? ทำไมจะใช้ได้ต้องผ่านเครือข่าย dtac เท่านั้นล่ะ ไม่จริงใจในการพัฒนา ผิดหวัง For society? Why does the app has to use only in dtac network. It is not truly development. So disappointed

5. Nice

6. facebook

7. ดีมากดีแท้ ทำเพื่อสังคมแบบนี้ เลิฟเลย ค่าอื่นเอาเป็นแบบอย่างบ้างนะ ได้ซื้ออาหารสดสดข้าวพันธุ์พื้นเมืองในราคาพิเศษ ด้วยขอบคุณ dtac ใช้ได้ทุกค่ายนะแอปนี้ สุดยอด

Cool dtac! I love that this app is for society. The others should use as an example. I could buy healthy food and local rice in special price. Thanks a lot dtac. This app can be used in every phone networks. Awesome.

8. ชอบครับ Thank you.

9. อยากให้เพิ่ม อยากให้เพิ่มพวกราคาอ้อย ปาล์ม ขางพารา ขึ้นมาอีกเพราะมันยังน้อยเกินไปสำหรับการให้ข้อมูลด้านอื่นๆ I want them to add more information about the prices of sugar cane, palm, rubber tree because there are little information about this.

10. เยี่ยมมากสำหรับเกษตรกรยุคใหม่ Excellent for the new age farmer.

11. ดีครับ มีประโยชน์มาก ดีใจครับที่ดีแท้มีบริการฟรี! ดีๆแบบนี้ Good.It is very useful. I'm glad that dtac has good and free application like this.

12. ดีครับ เป็นกำลังใจให้ทีมพัฒนาครับ Good. Keep going.

13. Mermaidevil ชอบมากละ เป็นลูกค้าแอปนี้มานานมากตั้งแต่ยังเป็นแบบsms มีทั้งสาระความรู้ที่นำไปใช้ได้จริง ถึงจะไม่ได้อ่านก็ยิ่งรู้ว่า มันอยู่ใกล้ๆตัวนี่เอง I love it. I have been their customer for ages since there was SMS. There is useful knowledge and can be used in real life. Even though I am not a farmer, it feels close to home.

14. ก็ดีนะ แต่จะกักให้แค่ dtac ละ happy ทำไม เศรษฐกิจเกษตรมันเป็นเรื่องของทั้งประเทศนะครับ อย่าใจแคบนักเลย so so. Why only on dtac and happy. The economy is for this country. Don't be narrow minded.

15. เยี่ยมเลย แต่... น่าจะแบ่งปันให้ค่ายอื่นได้ใช้ด้วยนะครับ ^_^. Great but should share this app to the other phone networks

16. Like John

17. ดีมากครับ ข้อมูลหลากหลาย ครอบคลุมทั้งเกษตรกร และทั่วไป Very good. variety of information including with farmers and people in general.

18. แอปดีนี้มีประโยชน์กับคนไทยมาก good and useful app for Thai people.

2. Twitter

1. สอนการใช้งานแอปพลิเคชัน #FarmerInfo โดยทาง #dtac จะให้คำแนะนำและชี้ช่องทางการทำธุรกิจ โดยใช้ประโยชน์จาก #Internet ผ่านทีมงาน #เน็ตอาสา
inform app using #FarmerInfo #dtac will give advice and point out how to do business by using internet by #เน็ตอาสา staffs
2. แอป #FARMERINFO เป็นแอปดีๆ เพื่อเกษตรกร จาก #dtac ซึ่งจะบอกข้อมูล ข่าวสารด้านการเกษตรจากทั่วประเทศแบบวันต่อวัน...
#FARMERINFO application is a good app for farmer from #dtac which gives you information about agriculture from around country day by day
3. #InternetChangesLives#dtac #FarmerInfo แจ่มมากครับ แสดงจุดยืนพยายามช่วยเพื่อนเกษตรกรโดยสามารถเปิดใช้แอปพลิเคชันนี้ได้ฟรีๆ โดยไม่คิดค่าค่าตัว ผมเคยพูดถึงแอปนี้ไปแล้วมีประโยชน์จริงๆ ครับ
#InternetChangesLives#dtac #FarmerInfo is cool. This can be showed that dtac wants to help farmers. This app is free. I used to talk about this app. It is good indeed.
4. sms ชยะบางทีก็มีดีนะ ใครมีเหมือนเราบ้าง ของ Farmerinfo
Sometimes sms are useful. Who has the same sms from Farmerinfo as me?
5. แอป "Farmer Info" อัปเดตข่าวแวดวงการเกษตร ข่าวสถานการณ์ทั่วไป ซึ่งเป็นการรวบรวมข้อมูล SMS จากบริการ *1677 ทางด่วนข้อมูลเกษตร #farmerinfo
"Farmer Info" application updates the news about cultivation, general information in form of sms from *1677 agriculture hotline #farmerinfo
6. "Farmer Info" เป็นแอปที่บอกต่อความเคลื่อนไหวเกี่ยวกับข้อมูลการเกษตรจากทั่วประเทศแบบวันต่อวัน #farmerinfo
"Farmer Info" is application which gives information about agriculture all around country day by day. #farmerinfo
7. คุณพูน สุนทรวิภาค กทม. รับซื้อมะพร้าว น้ำหอมสัปดาห์ละ 2000 ลูก ให้ลูกละ 12 บาท สนใจโทร 0850205786 #farmerInfo from dtac
Poon Soontornwipark, BKK, purchases 2000 aromatic coconuts per week 12 baht for each. 0850205786 for more information.
8. แอป Farmer Info ลูกค้า ใช้ฟรี ไม่คิดค่า data แนะนำให้เกษตรกรทุกคนควรลองใช้
free application for #dtac customers of Farmer Info no data charge. Recommend for the farmers.
9. รับข้อมูลข่าวสารจาก รักบ้านเกิด โดยการโหลดแอปพลิเคชัน ได้แล้ววันนี้ สำหรับผู้ใช้
Download Farmer info application form Rak Baan Gerd news today for #Dtac customers.
10. ประชาสัมพันธ์ : Dtac ออกบัตรเงินสด FARMER INFO บริการข้อมูลการเกษตร ย้ำความพร้อมเปิดให้บริการ
Announcement: Dtac releases FARMER INFO stored-value cards, gives information and ready for E-commerce service.

3. Instagram

1. #InternetChangesLives#dtac #FarmerInfo แจ่มมากครับ แสดงจุดยืนพยายามช่วยเพื่อนเกษตรกรโดยสามารถเปิดใช้แอปพลิเคชันนี้ได้ฟรีๆ โดยไม่คิดค่าค่าตัว ผมเคยพูดถึงแอปนี้ไปแล้วมีประโยชน์จริงๆ ครับ

#InternetChangesLives#dtac #FarmerInfo is cool. This can be showed that dtac wants to help farmers. This app is free, no data charge. I used to talk about this app. It is good indeed.

2. nuishow ใครมีญาติเป็นเกษตรกร ฝากบอกกันไปโดยด่วนทั่วรับ แอป #FarmerInfo บน iOS (และกรรูกาคุมนี้ บน Android และ WindowsPhone) แสดงราคารับซื้อหน้าโรงสีทั่วประเทศ(และราคาพืชผลอื่นๆอีก) อัปเดตรายชั่วโมงต่อไปนี้ ชาวนาไทยจะไม่ถูกกดราคาหน้าโรงสีอีก เพราะเช็คราคาจนพอใจได้ก่อนขนข้าวขึ้นเกวียนเดินทางมา มีอำนาจในการเลือก อีกทั้งใช้ฟรีภายใต้สัญญา #dtac ดีแท้จะเว้นคิดค่า data ที่วิ่งเข้าออกจากแอปนี้ เป็นผลงานและการดำเนินงานจากมูลนิธิร่วมด้วยช่วยกันสำนึกรักบ้านเกิด สมาร์ทโฟนเริ่มมีราคาถูกลง dtac จะออก #TrinetPhone ราคาต่ำกว่า 3,000 ทำให้เชื่อได้ว่า 3G จะเป็นประโยชน์กับชาวนาและทุกคน #InternetForAll

Inform to all who have family or relative as farmers app #FarmerInfo on iOS (and this July for Android and WindowsPhone) gives information of the purchase price from sellers around country and other prices of other products. Update hour by hour. Thai farmers will not be forced the price down because of checking the price before selling from now on. They have power to choose. Moreover, this app is free and no data charge in dtac network. This project is from Roam Duai Chuai Gun Saam Noek Ruk Baan Gerd foundation. The smartphone price is getting lower so dtac is going to release #TrinetPhone which the price is lower than 3000 baht. It is believe that 3G is useful for farmers and people in general.

tip_tipyapa@nuishow เขียนเลขอะ Great

tip_tipyapa ขอบคุณที่แบ่งปันนะ Thanks for sharing.

tip_tipyapa@nuishow อันดับแรกต้องสอนใช้ก่อนนะ กว่าจะสอนให้เปิดอ่านผลพยากรณ์ท้องถิ่นทาง sms ที่ทำในยโสธร ก็ระดมเจ้าหน้าที่สอนชาวบ้านนะ จะได้เข้าถึงข้อมูลฝนฟ้าอากาศ จะได้เตรียมสำรองแผนทัน ทำจนตอนนี้ สมาชิกอยากได้สมาร์ทโฟนเพื่อการเข้าถึงข้อมูลเลขอะ #FB page #cc-cba

First, the users have to be taught how to use. I have to ask for help from staffs to teach local people to read weather forecast sms. So they will reach to weather information easily and we will have planned to support. Now, members want smartphone to access the information directly.

amaoyja แต่เข้านาต้องมีสมาร์ทโฟนด้วยอะสิ Farmer must have smartphone though.

sowynarak ขอริงดาวโหลดหน่อยครับ please send me the download link

nuishow@sowynarak ลงลิงค์ใน Instagram ไม่เวิร์คหอรอครับ คุณก็กดลิงค์ไปยังหน้านั้นไม่ได้ยู่ดี ให้คุณค้นหาชื่อแอป #FarmerInfo นะครับ ง่ายมาก It doesn't work if you paste the link in Instagram. You can't link to that page. Just search FarmerInfo, that's it.

nuishow@amaoyja ใช่ แต่ 2 แต่ dtac กำลังทำสมาร์ทโฟนราคาถูกมากๆออกมาชื่อ กะถ้าจพใช้ฟิเจอร์โฟนจริงๆก็รับข้อมูลผ่าน SMS โดนกด *1677 ทางด่วนข้อมูลการเกษตร (ให้บริการมาตั้งแต่ปี 2551)

ooaann มีประโยชน์แค่ชาวนาจริงๆ จะใช้เป็นมียอะ

Yes, but dtac is going to release very cheap smartphone named #TrinetPhone. If you do want to use phone feature, just receive the sms from *1677 agriculture hotline (since 2551)

nuishow@ooaann เราต้องสอนเค้าครับ เขาอาจเก่งกว่าที่เราคิดก็ได้ เราต้องช่วยกันสร้างสังคมนี้ให้เป็นสังคมของความรู้
ครับ

We have to teach them. Maybe they will be better than we think. We must help each other to make this society become knowledge society.

3. nuishowพูดถึง"ข้าวกล้องหอมปทุมฯ"แล้วก็ต้องเล่าว่าเมื่อ 2 สัปดาห์ก่อนผมไปช่วยงานพิธีกรให้ #dtac กับคุณบุญชัย เบญจรงค์กุล มูลนิธิร่วมด้วยช่วยกันสำนึกรักบ้านเกิด เปิดโครงการ #ดีแทคเน็ตอาสา นำพนักงานและเจ้าหน้าที่ลงพื้นที่ชุมชนเกษตรกรทุกภาคเพื่อ "สอนการใช้งานอินเทอร์เน็ต" แต่ละกลุ่มที่ไปไม่ได้ไปสอนเพียงครั้ง แต่กลับเยี่ยมไปเรื่อยๆให้จนเป็น กลุ่มละ 3-4รอบ ติดตามผลและสอนกันจริงจัง สอนด้วย"มือถือ"นี้แหละ และที่น่ารักคือเค้าไม่จำกัดค่าย ใช้ซิม AIS หรือ True เค้าก็สอน ไม่มีเกียจจน (แต่เอาโต๊ะแนะนำซิม dtac ไปตั้งด้วยนะ เพื่อเปลี่ยน ..ฮา!) ตัวอย่างของเกษตรกรที่ได้รับการสอนและสามารถกลายเป็น #SmartFarmer ได้เต็มตัวก็คือ "วิสาหกิจชุมชนชมภู" เกษตรกรจากด.ชมภู อ.สารภี จ.เชียงใหม่ ทุกวันนี้มีเพจ Facebook, LINE ID และแอป #FarmerInfoไว้เช็คราคาพืชผล ผมได้อุดหนุนข้าวเขามาประมาณหนึ่ง (มันเริ่มต้นจากการที่เขาเดินมา "ให้" ผมก่อน 1ถุงแท้ๆ หลังจากนั้นผมจึงได้ซื้อข้าวทุกชนิดมาลอง) รู้สึกดีมากที่ได้ทานข้าวที่มาจากมือของชาวนาตัวจริง ทุกห่อเขาเขียนชื่อไว้หมดว่าปลูกโดยใคร (หลายเวลากินเนื้อวัวดีๆเขามีตราทะเบียนแล้วบอกชื่อคนเลี้ยง) ..น่าสนใจนะครับ ผมทั้ง Contact ไว้ให้เพื่อใครอยากลองซื้อข้าวจากพวกเขาจะครับ คิดต่อไปได้เลยมภาพ! :)

For Horm Pathum brown rice, 2 weeks ago I was host for #dtac with Mr. Boonchai Benjarongkul. Ruam Duai Chuai Khan Sam Nuek Rak Baan Gerd foundation opened #ดีแทคเน็ตอาสา project. Staffs and officers visit all area to teach internet using for many times, follow up the result by using phone. The important thing is the phone networks are not limited whether you use AIS, TRUE or Dtac. The example of one who became real #SmartFarmer is Chompoo, local state enterprise, and farmers from Chompoo sub district, Sarapee district, Chiang Mai. Now, there are Facebook, LINE ID and #FarmerInfo application to check products' prices. I bought their rice (starting when they gave me one free bag of rice and after that I bought every type of rice to try). I felt so happy that I ate rice from original resources and farmers. They wrote the farmers' names in every bags (similar to when we eat a premium beef which has signature). It is interesting. I left my contact to ones who want to buy rice from them. You can contact following this picture.

jokermaster619ที่แนนเกษตรกรตัวอย่างที่ได้ใช้ #InternetChangesLives เปลี่ยนชีวิต โดยทาง #dtac ได้ให้ความ
แนะนำในการประกอบธุรกิจ โดยทางพี่แนนเคยทำงานในกรุงเทพก่อนจะเปลี่ยนอาชีพ และจบการศึกษาจากอเมริกาสาขา IT ซึ่งที่เข
บอกว่าความรู้ที่เรียนมาต้องเริ่มต้นใหม่หมดเลยกับธุรกิจการทำนา โดยที่เขาศึกษาการปลูกข้าวมาจากใน #Google โดยล่าสุดทำ
เกษตรอินทรีย์และปลูกข้าวไรท์เบอร์รี่ เป็นที่ต้องการในตลาดมากและมีแฟนเพจด้วยนะครับ และสำหรับแอปพลิเคชัน #FarmerInfo
นั้นมีประโยชน์ต่อชาวไร่ชาวนามากครับ เพราะสามารถเช็คราคาข้าว และเปรียบเทียบราคาโรงสี และนำราคานี้มากำหนดราคาข้าวและ
ค่าใช้จ่าย ทำให้ไม่ขาดทุนแม้จะอยู่ในช่วงที่ราคาข้าวตกต่ำ

Nan, outstanding farmer, uses #InternetChangesLives to change her life. Dtac gave her information to do her business. She used to work in Bangkok before changing her job and she graduated from America, majoring in IT. She said that she had to start her new knowledge from her studying in farming by searching #Google. Recently, she does organic plants and grows rice berry which has been interested in market and fanpage as

well. For FarmerInfo app is very useful to the farmers because they can check the rice's price and compare with the price in the rice mill and set the rice's price and expenses so they don't lose money even in the low price period.

4. iamaonthแอป #FARMERINFO เป็นแอปดีๆ เพื่อเกษตรกร จาก #dtac ซึ่งจะบอกข้อมูล ข่าวสารด้านการเกษตรจากทั่วประเทศแบบวันต่อวัน สามารถเช็คราคาสินค้าเกษตรจากแหล่งรับซื้อที่น่าเชื่อถือทั่วประเทศ ราคาสินค้าจาก 6 ตลาดสดใหญ่ใน กทม. เป็นต้น#InternetChangesLives

#FARMERINFO is a good app for farmer from dtac which give you news and information about agriculture from around country day by day. You can check product price from reliable centres in country. For example, the product price from 6 main market in BKK#InternetChangesLives

APPENDIX 10 - Success Stories

Success Story 1

A happiness on my 3-Rai Land

Mr Pawnchai Prompiman

A middle age, 42 years old, agriculturist who had been through the obstacles to sustain and systematic the agriculture on his own land, has happily lived in his hometown at Baan Bon Dawn, Na Cha-Erng Sub district, Muang District, Chumpon

Pawnchai told us that during his childhood, his family can be described as ‘a poor’, he was a good kid. However, he had turn himself opposite to be a bad teenage who did not pay attention to the school and create the disappointment to his family hugely. Once he became a monk, he had lived his life with consciousness and attention. He now got married with 2 sons living together.

Pawnchai started his agricultural career as a monoculture and relied on chemical fertilizer which was not sufficient to cover the cost. In 1994, I had implemented to do the integrated farming system step by step. Also the fertilizer management had been replaced by organic fertilizer to reduce the cost and to gain the real benefit. Importantly, I have a great support from my family.

On the 3 Rai land, there are chemical-free durian, rose apples and house home-grown vegetable such as Vegetable fern, Gnemon (Phak Liang), Acacia pennata and Mlientha suavis etc. which can be also sold to the market. Pawnchai and Wipa, his wife, have also bred the Gnemon (Phak Liang) and chemical-free roseapples, pepper and Kumquat trees to sell to other farmers which they can earn over 15,000 baht per month. Pawnchai has used the natural system to take care his farm by making compost and the liquid fertilizer (EM-Effective Microorganisms), for his own use. He also has scaled up his knowledge by searching more information and created his own technique.

Pawnchai has told that he knew there is a service on agricultural information or service *1599 in 2008 when the data collector came to provide the agricultural information to him and advised him to apply the service for free. I was interested so I applied to use the service up to now. I have signed up to use the Suan Ngeon Rai Thong category which is related my farming.

Since I have used the *1599 service via the mobile phone. I have gained more knowledge by searching the information, trying to find solutions from various ways

which is very simple, convenient, cost-saving and Q&A session. I have learned and tried to understand the information which is endless. It can also help to solve agricultural problems on my land. I have applied the techniques to adjust and implement to be used in my farming system, mostly are the liquid fertilizer (EM) and house home-grown vegetables.

After I have used the *1599 service, I have a chance to provide agricultural knowledge on Layering method for papaya, pepperbush etc. which benefit to the other farmers. Many people know me about the information I provided which there are many people come to visit and buy the agricultural products and tree nursery for various plants. Aforementioned, my financial situation and family are getting better respectively, Pawnchai said.

Success Story 2

Mr Boonsuan Kaewpaitoon

17 March 1963, 47 years old

Education: Primary school

Marital status: married with Mrs Udom Kaewpaitoon, 2 daughters.

Address: 4 Baan Sawangpattana, Nongsaeng, Baan Haade, Khon Kaen Province

Occupation: Mango grower for the off-season on 61 rais of land.

The mango types: Chok-anan, Namdokmai

Started growing the off-season mangoes in 1988.

Land is located in 2 kms away from Baan Sawang.

Land and soil type: highland, sandy soil

Water: 4 ponds for agricultural activities

Season of off-season Harvest: 2 periods; 1) before the harvest - March and

2) after the harvest - July to October

Production: Export 13 tons to Japan/year for Namdokmai and Chok-anan mangoes.

Only partially placed in market in Baan Haade

Networking: the chairman of Mango Grower Group with 80 members from T. Khok Samran, T. Baan Haarde, T. Nongsaeng and T. Nonesomboon

Relationship in the community: Many agriculturists have shown an interest in growing mangoes in the off season. As the chairman of Mangoes grower in the off season, he has

shared the knowledge and new technologies of mangoes growing until harvest process in the off season to other agriculturists and encouraged them to do more on export.

The service of *1599: He has signed up to use the Suan Ngoen Rai Thong Category since November 2008. He has brought the information and knowledge to use in his land; develop a formula to enrich mangoes by making an egg hormone and organic liquid fertilizer to open foliage of mango trees.

Satisfaction: Satisfied

Learning new information which is very helpful such as the news of organizing events in different areas around the country, the real time of oil price index. These are very impressive with the information provided by DTAC who is the only organization to embrace this technology and communication to benefit the farmers.

Although Boonsuan has become a successful cultivation of mangoes, he continually checks the *1599 for further information and update new knowledge.

Success Story 3

Name: Kayyoon Yerdiao

Address: 211 Mu. 10 Baan Nong Chiang Mong, Tambol Kheelek, Amphur Muang, Ubon Ratchathani province

Occupation: 4 rais of Rice field, 7 cows and seasonal vegetable after harvesting.

Kayyoon Yerdiao, 35 years old Agriculturist from Baan Nong Chiang Mong, Tambol Kheelek, Amphur Muang, Ubon Ratchathani province has 4 rais of rice field and seasonal vegetables, as extra income, after harvesting. He is very active and keen to learn new things. However, he had no agricultural guidelines to follow. Since he signed up for the *1599 service in 2009, his agricultural practice has been changed. He has applied to access the 3 categories of *1599 service. Once he receives the sms, he usually writes down in his notebook. If the sms has indicates there is further information to be provided, he would call *1677 to enquire for a complete set of information. He also records the communication between himself and the Farmer info call centre so that he is able to listen and take note on the guidelines and suggestions. He has called his book with title of: Organic Agriculture (Rak Baan Kerd) by Kayyoon Yerdiao, *1599 Farmer info. From the information from *1599, he has produced the organic fertilizer and liquid organic fertilizer to be used in his own farm which can reduce the cost of production.

He is impressed by the free-chemical pesticide on how to eliminate the *Plutella xylostella* L. in the Cruciferae which can reduce the cost of chemical pesticide and also it is organic.

Now, Kayyoon is the Volunteer Soil Expert in his Tambol (sub-district) to assist the villagers who have faced problems. He has brought the information retrieved from *1599 and shared the information to benefit other agriculturists in his community as well. He is very proud of what he is doing.

Success Story 4

Name : Narongsak Kaewpan Age: 47 years old

Address: 67 Mo. 6 Tambon Seurhok, Amphur Muang, Chinat Province

Application: *1677 – Thoong Ruang Thong Category and Livestock Setthi

Narongsak has rented 95 rais of rice field and he also has 23 cows. He has produced the organic ball and liquid fertilizer to use in his farming and rice field.

He started to learn how to reduce the cost of agricultural practice by attending the agricultural training at the Dr. Puey Ungphakorn Foundation; however, he did not earnestly apply the knowledge to use in his rice field. Since he joined the *1599 service, his quality of life has been increased. He has implemented and enhanced the knowledge he received via *1599 which has greatly reduced the production cost and increased more income.

He also shares and suggests his friends, agriculturist and farmers, in community to use and sign up for the *1599 service. On the other hand, he informs the *1599 to alert other members whenever there is an outbreak of disease and insect pests.

Success Story 5

Agriculturist: Mr Nattakarn Panglieng, 35 years old

Address: 82 Mu 5 Baan Wat Boate, Tambon Koh Tuad, Amphur Pak Panung, Nakhon Sri Thammarat Tel : 083-176- 2169

Career: Agriculturist, 20 Rais of pine tree, 20 rais of rice field and 0-5 rai of fish farm

Land information

The land is located at Baan Wat Boate, Tambon Koh Tuad, Amphur Pak Panung, Nakhon Sri Thammarat which is the wetland type and suitable for rice growing. However, local agriculturists have increasingly changed to grow the palm trees and mixed integrated farming but they have abandoned the rice fields. When the rice price was high, the agriculturist would commence to implement those relinquished land for rice growing; Chainat rice, Hompathum rice, Phitsanulok rice. The chemical fertilizers are applied on these rice growing at which the land degradation can be seen. Although the local government offices, the land development department has been trying to educate the agriculturist to use organic, it seems the chemical fertilizers are still used due to the low cost and easy access. For the water management, the area is under the development of Pak Phanang River Basin so the water management has been effective and adequate for agricultural business.

General Information

Prior to become an agriculturist, Nattakarn worked in the garage in Bangkok. She decided to quit and return to her hometown and started her agricultural life by planting pine trees and fish farming. Nattakarn is very keen to learn new things so she likes spending time to search for agricultural information. She has then followed the agricultural news which broadcasts on the channel 9. At the end of news, there is the programme called “smart agriculture *1599” which encourages her to apply to receive the information from *1599. She signed up for “Pasusat Sethee (Livestock millionaire)” so she can bring and implement the information, treatment, bacteria and diseases, to her fish farming. She also applied “Thoong Ruang Thong and Suan Ngeon Rai Thong” for the agricultural sectors for which she has shared among her groups. Additionally, she has frequently listened to the *1599 programme on the DFM91.75MHz radio, Nakhon Srithammarat and attended the Golden Land Seminar in 2009.

Nattakarn stresses that the *1599 service has benefited her career and life. The information provide by *1599 are very useful and practical which she has brought to apply in her farming to reduce the production cost such as the food recipe, organic fertilizer, soil improvement. She additionally mentioned that the reduction of chemical has led to better health of agriculturist and quality of products. She has now raised red palm weevils and eels in the cement tanks to increase household income. Once this becomes successful, she will share information and process to other agriculturists in the

future. Finally, she hopes that the *1599 service will continually provide the agricultural information to agriculturists.

Success Story 6

Name: Nattapong Kaewnuan

Birthday: 24 February 1978

Address: 123/2 Tambol Neurnmaprang, Ampher Neurnmaprang, Phitsanulok 65190

1999-2003 Established the Group of the New Theory of Agriculture, Ampher Neurnmaprang, and the Group of Organic Productions Ampher Neurnmaprang

2003-2006 Operational Officer in the Agricultural Network, Phitsanulok Province, the Community Learning Centers in the lower northern provinces and Thai Health Promotion Foundation covering the main area in Phitsanulok province including other 7 lower northern provinces and also a co-founder of the Neurnmaprang community development.

2007-2010 Aimed to scale up the Sufficiency Economy to the implementation process and provide the knowledge of Sufficiency Economy to the Community.

The *1599 Service: Could you tell us how the service benefits you since you have joined.

Since I joined the *1599 service, I feel that I am not alone in my agricultural life. It has given me a warm feeling of having other agriculturists across the country. Whenever I face any problems, I can dial *1599 to find a solution. Additionally, I also have the moral support and encouragement from people who are also the agriculturists as me. I am aiming to achieve and will always do to become a successful agriculturist in near future.

Does the service *1599 benefit and support your agricultural practice? How?

I have signed up for the Suan Ngeon Rai Thong Category which I have used their information to develop and increase the quality of production process, to reduce the cost, to market the product and to find solution/technique to prevent the insect and plant diseases. I have also learned how to treat my health by using the local herbs which can be easily found in the area. I believe that the information provided by the *1599 is very useful and can benefit and enhance my farm and food productions. This can lead to a good model of food security in the community.

Land Condition and Area:

25 Rais of Land is located in Amphur Neurnmaprang, Phisanulok Province. The main crops are the in-season rice field and beans. It is mainly a monoculture. The main issues that the agriculturist (Nattapong) faced, were; drought, high investment, slumps in prices at selling. Finally, the agriculturist decided to improve the production process by loaning 200,000 Baht from the Bank for Agriculture in 2007 to be a starting cost to implement the integrated farming system by converting 3 Rais of the rice field to the patches, digging a small pond to be used during the drought, setting up a water system and building a house to keep the farming tools and nursery trees.

Activities and agricultural patterns:

5 Rais of land was turned into the patches with watercourse in between, the crops consist of Chok-anan mango, coconut and bananas. The patches are covered by vetiver grass to protect soil slides. Another 10 Rais of land are managed as the residential area; small pond, 3 Rais of rice field and 7 Rais for intensive-elaborative agriculture with 52 types of fruits and herbs. The 10 Rais of land along the canal; 3 rais of land is managed to be bamboo garden and vegetables, 7 rais of land is for the jasmine rice and red jasmine rice to produce organic rice.

Success Story 7

Name: Roongnapa Yodmai, 36 Years old

Address: 83 Mu. 1 Baan Don Mei, A. Muang, Amnatcharoen Province.

Occupation: Rice Farmer Land: 13 Rais.

Roongnapa Yodmai applied to use the farmer info in May 2008 by receiving a SMS from *1599 inviting to sign up, she then applied for the service of Thoong Ruang Thong Category. Roongnapa likes to learn new knowledge, especially if the matter related to Agriculture. She has no time to attend any trainings in organizations so this is a good opportunity for her to receive and to enquire the information through *1599. The information has been daily sent to the user and she can ask for more information via the *1599 then press 2. Roongnapa has recorded the formulas, knowledge and practices from the information provided by *1599 such as the organic fertilizer in her rice fields and the outcomes show;

- 2008 Old fashioned rice farming using the chemical fertilizer; 4 Rais of Waxy rice and 9 Rais of and Non-Waxy Rice. The expense of chemical fertilizer costed 15,000 baht which produced 85-87 sacks of Non-waxy rice and 38-40 sacks of waxy rice.
 - 2009 We changed to use the organic fertilizer made by ourselves and liquid fertilizer from the information provided by *1599. The expense of fertilizer reduced to 4,700 baht with the production of 115 Sacks of non-waxy rice and 62 sacks of waxy rice. It has shown that the rice has grown well and rice kernel gains full weight. Rice field has no impact from the pest comparing with the neighbouring rice fields. Furthermore, the rice in this land has stronger scent and cleaner.
- Roongnapa also inquired on how to expand the Effective Microorganisms (EM) and use the EM in the agriculture which she now applies it in her fields.
- Roongnapa said “I am happy to use *1599 service and really appreciate the service provider who creates the agricultural information to the agriculturists. This is good service to provide a basic knowledge and to support the agriculturists who benefits from the *1599 service.”

Success Story 8

Mr Siwakorn Suwanmanee was born on 19 August 1948 (63 years old), the owner of Suwanmanee farm. He is an agriculturist who used to be a Project Manager of a mobile phone company. He owns 110 rais of land located in Baan Dongmafa Mu.8, Tambon Makleurma, Amphur Soongneon, Nakhonratchasima which is on the mountain, 480 meters above the sea level. From his land, you will be able to see the Lumtrakhong Reservoir and Seekute Market. There are also waterfalls passing the 7 points of check dams. He installed the under water system and 4 sets of water pump to pump water into the 2 cement ponds; with size of width 2.5 m., height 5.6 m., built in his land.

There are 200 trees of longan, 70 tress of santol and cumin, 300 tress of monkey apples, 400 tress of guava, 200 trees of sapodilla, 200 trees of pomelo, 50 trees of mango and Arabica coffee. The main commercial crops are longan, santol and guava. He also grows the seasonal vegetable by planting parsley between the patch lines of corn.

The community has strong support and good teamwork from the villagers; building the check dams, organic networking group, Arabica coffee group (50 members), organic vegetable group (5-7 members) of which Siwakorn is the Chair of community.

How do you feel after signing up for the *1599 service and how does it benefit you?

Siwakorn met the Farmer Info staff of Ratchasima province when they came to the area to collect data which was in July 2009. They briefed him on how the *1599 works and how useful of the service through the SMS, he then applied to be a member. He has received various useful information which he can use them to develop his agricultural practices especially the formula of organic liquid fertilizer. He likes the provided information on the agricultural selling price at markets and price guarantee so that he can foresee the direction of selling price and also to search information on the Rakbankerd website.

Success Story 9

Som is an agriculturist who likes to learn new agricultural techniques so he has adequate knowledge of organic. He heard the information of *1599 service from the radio channel in Chiang Rai then he signed up for the service, since September 2008, and used it up to now.

Som mentioned the reason why he decided to sign up to receive the agricultural information via *1599 as below;

“I am and love being an agriculturist. I think the information provided by *1599 is very useful and various. I would like to use those information to improve my farming. In the past, my knowledge and skill on mushroom farming were limited. This service has given me better understanding with necessary information on how to manage mushroom farming. The *1599 is a good channel to provide the fact on agriculture which really benefits to the farmers.

I receive 6-8 messages per day relates to the market price and oil price. I have brought and implemented these information to my farming system and fortunately, it has benefit greatly to the farm. For example, I use banana shoot mixed with/or diluted by white whisky and vinegar to produce the organic fertilizer and to improve the soil quality (more mellow).

I also learn how to make egg hormone to enrich human health and also for vegetables. It can be also mixed with banana shoot and spray in the rice field before producing grain

which it can increase rice production. I also applied *1677 service which enables me to talk and consult with an expert on how to develop and manage Sajor-caju mushroom farming which become a successful one.

Having said that, I have now shared the knowledge with my neighbours and there are many people show an interest to learn with me. They have adopted the information and applied in their farms which can reduce the cost and increase income at the same time. Now, there are about 80 members from many districts in Chiang Rai, who learn the agricultural technique and information from Som, have formed a networking group to share information and knowledge on agriculture.

APPENDIX 11 - App-User Questionnaire

General Information

1. Gender

☐ Male ☐ Female

2. Age (years)

3. Educational level

☐ Lower than primary school ☐ Primary school ☐ Lower-secondary school
☐ Upper-secondary school ☐ University degree ☐ other education

4. Marital Status

☐ Single ☐ Married ☐ Divorced ☐ Widow/Widower

5. Household members (including yourself)

6. What is your current average monthly income from agricultural activities?

_____ (Baht)

7. What is your current average monthly income from other activities?

_____ (Baht)

8. Are you member of a cooperation?

☐ Yes ☐ No

9. Are you member of the Royal Project?

☐ Yes ☐ No

Agricultural production & extension

Number of questionnaire:

Date:

Time

Name of the collector:

10. Agricultural area

_____ (rai)

11. Land ownership

☐ Own ☐ Rent ☐ Both

12. What is your major agricultural product?

☐ Rice ☐ Longan

13. What other agricultural products do you have?

☐ Grains ☐ Fruits ☐ Vegetables ☐ Aquaculture ☐ Livestock

☐ Others _____

14. What is your total average yield per season for your major crop?

(please indicate if the number refers to pieces, kilogram, tons or any other measurement)

_____ ()

15. What is the selling price for your main agricultural product?

(please indicate if the price refers to pieces, kilogram, tons or any other measurement)

Average price: _____ (Baht per)

Highest price ever received _____ (Baht per)

Lowest price ever received: _____ (Baht per)

16. How do you sell your products? (more than one answer possible)

☐ On farm ☐ Village market ☐ Trader ☐ Export

☐ Regional/City market ☐ Online ☐ Others

17. How many employees work for you on average per month (apart from family labour)?

_____ (per month)

18. How much do you spend for labour per month on average?

_____ (Baht)

19. What kind of pesticides do you use?

☐ Chemical ☐ Organic ☐ Both ☐ Others _____

20. Please name the top 3 pesticides you use?

Name	Liquid/Powder/solid	Recommended dosage	Applied dosage

21. How often do you apply pesticides per week?

_____ (per week)

22. How much do you spend for pesticides per month?

_____ (Baht/month)

23. What kind of fertilizer do you use?

☐ Chemical ☐ Organic ☐ Both ☐ Others _____

24. Please name the top 3 fertilizer you use?

Name Liquid/Powder/solid Recommended dosage Applied dosage

25. How often do you apply fertilizer per month?

_____ (per month)

26. How much do you spend for fertilizer per month?

_____ (Baht/month)

Agricultural Information Needs

27. What are the most important agricultural information for you? (More than one answer possible)

☐ New varieties and techniques ☐ Pest and Diseases ☐ Pesticides and Fertilizer
☐ Input supply/prices ☐ Weather Forecast ☐ Water availability
☐ Post-harvest technologies and techniques ☐ Market prices
☐ Others, please specify _____

28. In your family, who plays the main role in conveying new agricultural information?

(Only one answer possible)

☐ Yourself ☐ Your wife/husband ☐ Your children ☐ Brother(s) ☐ Sister(s)

☐ Father ☐ Mother ☐ Others, please specify _____

29. Which of the following topics would you like to know more about?

(more than one answer possible)?

☐ Pesticide & Fertilizer Impacts on Health ☐ Pesticides & Fertilizer use

☐ Pest & Diseases Identification and Treatment ☐ New cultivation methods

☐ New /different crops/breeds ☐ General agricultural education

☐ Market access and marketing strategies ☐ Production standards

☐ End-Consumers needs and opinion ☐ Financial assistance

☐ Post-harvest treatments and technologies ☐ Certification possibilities

(GAP; ...)

☐ Others, please specify _____

30. What are the major problems you are facing during one cropping season?

(more than one answer possible)

☐ Land unavailability ☐ Labour shortage ☐ Water shortage ☐ Unknown pests/diseases

☐ High input prices ☐ Low yields ☐ Post-harvest losses ☐ Low market prices

☐ Other problems, please specify _____

Mobile phone use and satisfaction

31. When did you purchased your first mobile phone?

_____ (years ago)

32. Since when do you own a smartphone?

_____ (years ago)

33. How much did you pay for your last mobile device?

_____ (Baht)

34. How much do you pay in average per month for your mobile services?

(incl. internet, messages, calls, etc.)?

_____ (Baht/month)

35. What is your experience with network quality/reception in your area?

☐ Very Poor ☐ Poor ☐ Average ☐ Good ☐ Very Good

36. Which features of your phone are the most important for you? (more than one answer possible)

☐ Calls ☐ Messages ☐ Entertainment (Music, Video, Games) ☐ Internet
☐ Others _____

37. How often do you use the different features of your phone (minutes/day). (Cross the right box)

Feature	0 mins	1-15 mins	16-30 mins	31-45 mins	45-60 mins	60+ mins
Calls						
Messages						
Music/Radio						
Games						
Videos						
Internet						
Others						

38. How useful do you think mobile phones are for your private life? (Cross the right box)

Very unsuitable Unsuitable Neutral Useful Very useful

39. How useful do you think mobile phones are for your agricultural work? (Cross the right box)

Very unsuitable Unsuitable Neutral Useful Very useful

40. How easy would you consider the use of a mobile phone? (Cross the right box)

Very difficult Difficult Neutral Easy Very easy

41. How easy is it in your opinion to learn about the features of a mobile phone? (Cross the right box)

Very difficult Difficult Neutral Easy Very easy

42. Please give your opinion on the following statements (Cross the right box)

A mobile phone

	Highly Agree	Agree	Whether agree nor disagree	Disagree	Highly Disagree
Makes my life easier					
Helps me with my work					
Increases my agricultural productivity					
Increases my work efficiency					
Device is expansive					
Service is expansive					
Provides me with mobility					
Reduces my travel needs/costs					
Provides me with useful information					
Is a status symbol					
Is significantly important nowadays					

Farmer Info Application

43. When did you start using the FARMER INFO application?

_____ (months ago)

44. Did you subscript for the SMS information service before?

☐ Yes, since when _____ (years ago)

☐ No

45. Do you also use www.rakbankerd.com to access information?

☐ Yes

☐ No

46. Do you use any other application/website or organization to access agricultural information?

☐ Yes, please specify _____ ☐ No

47. How did you noticed the application is available? (only one answer)

☐ Family ☐ Friends ☐ Neighbours ☐ Radio ☐ TV ☐
Print Media

☐ Internet ☐ Rak Ban Kerd service team ☐ Others _____

48. Did you receive any kind of training on how to use the application?

☐ Yes, from whom _____ ☐ No

49. How often do you use the application? (only one answer)

☐ More than once a day ☐ Once a day ☐ More than once a week
☐ Once a week ☐ Less than once a week

50. How satisfied are you with the service? (check the right box)

Very satisfied Satisfied Neutral Unsatisfied Very unsatisfied

51. What is the most important feature of the service for you? (only one answer)

☐ Buying Price ☐ Price at Fresh Market ☐ Rak Ban Kerd
Shop

☐ News ☐ Useful Agricultural Videos ☐ Cost Calculation

52. Do you watch the provided videos to learn more about agricultural practices?

☐ Yes ☐ No

53. Do you apply some of the recommendations in the videos?

☐ Never ☐ Once ☐ Sometimes ☐ Regularly

54. Do you think the information from the videos helped you to improve your
production? (cross the right box)

Highly agree Agree Whether agree nor disagree Disagree Highly Disagree

55. Would you like to get more information?

☐ Yes, please specify the kind of information _____ ☐ No

56. Do you sell your products via Rak Ban Kerd online shop?

☐ Yes ☐ No

57. Do you agree that the farmer info application helps you to compare prices
easily?

(cross the right box)

Highly Agree Agree Whether agree nor disagree Disagree Highly Disagree

58. Do you agree that the farmer info application enables you to achieve higher prices?

(cross the right box)

Highly Agree Agree Whether agree nor disagree Disagree Highly Disagree

59. Do you agree that the farmer info application provides you access to new markets/customers? (cross the right box)

Highly Agree Agree Whether agree nor disagree Disagree Highly Disagree

60. Would you recommend the farmer info application to other farmers?

☐ Yes

☐ No

APPENDIX 12 – Non-User Questionnaire

General Information

1. Gender

☐ Male

☐ Female

2. Age (years)

3. Educational level

☐ Lower than primary school

☐ Primary school

☐ Lower-secondary school

☐ Upper-secondary school

☐ University degree

☐ other education

4. Marital Status

☐ Single

☐ Married

☐ Divorced

☐ Widow/Widower

5. Household members (including yourself)

6. What is your current average monthly income from agricultural activities?

_____ (Baht)

7. What is your current average monthly income from other activities?

_____ (Baht)

8. Are you member of a cooperation?

☐ Yes

☐ No

9. Are you member of the Royal Project?

☐ Yes

☐ No

Agricultural production & extension

Number of questionnaire:

Date:

Time

Name of the collector:

10. Agricultural area
_____ (rai)
11. Land ownership
☐ Own ☐ Rent ☐ Both
12. What is your major agricultural product?
☐ Rice ☐ Longan
13. What other agricultural products groups do you cultivate?
☐ Aquaculture ☐ Livestock ☐ Vegetables ☐ Grains ☐ Fruits ☐
Forestry
☐ Others _____
14. What is your total average yield per season for your major crop?
(Please give the number in ton)
_____ ()
15. What is the selling price for your main agricultural product?
(please give the price in Baht per kilogram)
Average price: _____ (Baht per kilogram)
Highest price ever received _____ (Baht per kilogram)
Lowest price ever received: _____ (Baht per kilogram)
16. How do you sell your products? (more than one answer possible)
☐ On farm ☐ Village market ☐ Trader ☐ Export
☐ Regional/City market ☐ Online ☐ Others

17. How many employees work for you on average per month (apart from family labour)?
_____ (per month)
18. How much do you spend for labour per month on average?
_____ (Baht)
19. What kind of pesticides do you use?
☐ Chemical ☐ Organic ☐ Both ☐ Others _____
20. How often do you apply pesticides per week?
_____ (per week)

21. How much do you spend for pesticides per month?

_____ (Baht/month)

22. What kind of fertilizer do you use?

☐ Chemical ☐ Organic ☐ Both ☐ Others _____

23. How often do you apply fertilizer per month?

_____ (per month)

24. How much do you spend for fertilizer per month?

_____ (Baht/month)

Agricultural Information Needs

25. What are the most important agricultural information for you? (More than one answer possible)

- ☐ New varieties and techniques ☐ Pest and Diseases ☐ Pesticides and Fertilizer
☐ Input supply/prices ☐ Weather Forecast ☐ Water availability
☐ Post-harvest technologies and techniques ☐ Market prices
☐ Others, please specify _____

26. In your family, who plays the main role in conveying new agricultural information?

(Only one answer possible)

☐ Yourself ☐ Your wife/husband ☐ Your children ☐ Brother(s) ☐ Sister(s)

☐ Father ☐ Mother ☐ Others, please specify _____

27. How do you get agricultural information (more than one answer possible)?

- ☐ TV ☐ Radio ☐ Newspaper ☐ Internet ☐ Mobile Application
☐ Extension Officer ☐ Other _____

28. Does it involve any travel or costs to receive proper agricultural information for you?

Travel: ☐ Yes ☐ No

Costs: ☐ Yes, _____ (Baht) ☐ No

29. Which of the following topics would you like to know more about?

(more than one answer possible)?

- | | |
|-----------------------------------------------------------------------|---------------------------------------------------------|
| <input type="checkbox"/> Pesticide & Fertilizer Impacts on Health | <input type="checkbox"/> Pesticides & Fertilizer use |
| <input type="checkbox"/> Pest & Diseases Identification and Treatment | <input type="checkbox"/> New cultivation methods |
| <input type="checkbox"/> New /different crops/breeds | <input type="checkbox"/> General agricultural education |
| <input type="checkbox"/> Market access and marketing strategies | <input type="checkbox"/> Production standards |
| <input type="checkbox"/> End-Consumers needs and opinion | <input type="checkbox"/> Financial assistance |
| <input type="checkbox"/> Post-harvest treatments and technologies | <input type="checkbox"/> Certification possibilities |
- (GAP; ...)

☐ Others, please specify _____

30. What are the major problems you are facing during one cropping season?

(more than one answer possible)

☐ Land unavailability ☐ Labour shortage ☐ Water shortage ☐

Unknown pests/diseases

☐ High input prices ☐ Low yields ☐ Post-harvest losses ☐ Low

market prices

☐ Other problems, please specify _____

Mobile phone use and satisfaction

31. When did you purchased your first mobile phone?

_____ (years ago)

32. What mobile device do you possess currently?

☐ Basic phone (only SMS, Call)

☐ Feature Phone (SMS, Call, Internet, Camera, Basic Apps)

☐ Smartphone (Advanced Apps, Touchscreen, Internet, Advanced Camera)

33. How much did you pay for your last mobile device?

_____ (Baht)

34. How much do you pay in average per month for your mobile services?

(incl. internet, messages, calls, etc.)?

_____ (Baht/month)

35. Which provider do you use?

☐ TrueMove ☐ AIS ☐ TOT ☐ MY

36. What is your experience with network quality/reception in your area?

☐ Very Poor ☐ Poor ☐ Average ☐ Good ☐ Very Good

37. Which features of your phone are the most important for you? (more than one answer possible)

☐ Calls ☐ Messages ☐ Entertainment (Music, Video, Games) ☐ Internet
☐ Others _____

38. How often do you use the different features of your phone (minutes/day). (Cross the right box)

Feature	0 mins	1-15 mins	16-30 mins	31-45 mins	45-60 mins	60+ mins
Calls						
Messages						
Music/Radio						
Games						
Videos						
Internet						
Others						

39. How useful do you think mobile phones are for your private life? (Cross the right box)

Very unsuitable Unsuitable Neutral Useful Very useful

40. How useful do you think mobile phones are for your agricultural work? (Cross the right box)

Very unsuitable Unsuitable Neutral Useful Very useful

41. How easy would you consider the use of a mobile phone? (Cross the right box)

Very difficult Difficult Neutral Easy Very easy

42. How easy is it in your opinion to learn about the features of a mobile phone? (Cross the right box)

Very difficult Difficult Neutral Easy Very easy

43. Please give your opinion on the following statements (Cross the right box)

A mobile phone

	Highly Agree	Agree	Whether agree nor disagree	Disagree	Highly Disagree
Makes my life easier					
Helps me with my work					
Increases my agricultural productivity					
Increases my work efficiency					
Device is expensive					
Service is expensive					
Provides me with mobility					
Reduces my travel needs/costs					
Provides me with useful information					
Is a status symbol					
Is significantly important nowadays					

44. Do you access agricultural information through your mobile phone?

☐ Yes ☐ No ☐ If not, would you like to? ☐ Yes ☐ No

45. What agricultural information would be most useful for you to access via your mobile phone?

☐ New varieties and techniques ☐ Pest and Diseases ☐ Pesticides and Fertilizer
☐ Input supply/prices ☐ Weather Forecast ☐ Water availability
☐ Post-harvest technologies and techniques ☐ Market prices
☐ None ☐ Others _____

46. How would you like to receive the information?

- ☐ SMS
 ☐ Call
 ☐ E-Mail
☐ Voice Message
 ☐ Video
 ☐ Pictures
☐ Smartphone Application

47. Who should provide the information?

- ☐ Ministry of Agriculture
 ☐ Ministry of Information and Technology
☐ Mobile Phone Provider
 ☐ Non-governmental Organization
☐ University
 ☐ Others _____

48. Would you trust information provided by Rak Ban Kerd Foundation or dtac?

Rak Ban Kerd: ☐ Yes ☐ No dtac: ☐ Yes ☐ No

49. What would you expect from accurate, on-time information on your mobile phone?

- ☐ Higher Income
 ☐ Higher Yields
☐ Lower Input Prices
 ☐ Better Product Quality
☐ Lower Production Costs
 ☐ Better marketing
☐ Others _____

APPENDIX 13 – Qualitative Content Analysis

P - I d	Paraphrase	G-Id	Generalized paraphrase	R1- Id	1st reduction category	Assigned generalized paraphrases	R 2 - I d	2nd reduct ion catego ry	Assigned categories of first reduction
B - P 1	She is studying nursery and her boyfriend works with freeze products	B-G10	Education and professional experience	B-R1	Agricultural Experience	B-G5, B-G13, B-G61, B-G62, B-G64, B-G69	B - R ' 1	Farmer's situation	B-R1, B-R2, B-R4, B-R5, B-R6, B-R7, B-R8, B-R18, B-R28
B - P 2	Studying at university	B-G2	Educational Background	B-R2	Marketing channels	B-G9, B-G16, B-G38, B-G45, B-G51, B-G56, B-G65, B-G82, B-G131, B-G153	B - R ' 2	dtac	B-R9, B-R26, B-R27
B - P 3	Growing and selling of vegetables	B-G3	Agricultural produce cultivated	B-R3	Organic agriculture	B-G12, B-G14, B-G15, B-G48, B-G49, B-G66, B-G67, B-G74, B-G107, B-G122, B-G145	B - R ' 3	Mobile devices	B-R10, B-R11
B - P 4	Born in the area	B-G4	Place of Birth	B-R4	Agricultural Problems	B-G17, B-G19, B-G43, B-G44, B-G52, B-G55, B-G68, B-G71, B-G72, B-G73, B-G75, B-G77, B-G125	B - R ' 4	Agricultural production	B-R3, B-R17
B - P 5	One to two years agriculture, not serious, growing flowers	B-G5	Poor agricultural experience	B-R5	Information needs	B-G18, B-G54, B-G70, B-G76, B-G127	B - R ' 5	Farmer Information application	B-R12, B-R13, B-R14, B-R15, B-R16, B-R29
B - P 6	Expanding agricultural production due to new land, rented from government	B-G6	Expansion of agricultural production	B-R6	Cooperation between farmers	B-G20, B-G41	B - R ' 6	RBK	B-R20
B -	Land size unknown	B-G7	No recording of agricultural activities	B-R7	Mobile device	B-G21, B-G22	B -	Smart Farmer	B-R19, B-R21, B-R22, B-R23,

P 7					experience		R 7	r Projec t	B-R25
B - P 8	4 to 5 000 Baht per month from agriculture	B-G8	Low income from agriculture	B-R8	Mobile costs	B-G23	B - R 8	Stakeholder Cooperation	B-R24
B - P 9	Selling of products at the market twice a week in the evening	B-G9	Marketing via local market	B-R9	dtac	B-G24, B-G86, B-G89			
B - P 10	Average selling price at local market		Marked as insignificant.	B-R10	Ease of use	B-G25, B-G110, B-G126			
B - P 11	No member of any organization		Marked as insignificant.	B-R11	Smartphone features	B-G26, B-G78			
B - P 12	Renting of land but no sharing required	B-G11	Land status rented	B-R12	Farmer Info Application	B-G27, B-G28, B-G57, B-G84, B-G92, B-G104, B-G120, B-G134, B-G135, B-G152			
B - P 13	Garlic residue and cow dung from market as fertilizer, no use of chemical pesticides	B-G12	Use of organic fertilizer	B-R13	Training for Farmer Info	B-G29, B-G30, B-G109, B-G132			
B - P 14	Choosing of inputs by packaging not professional experience	B-G13	Inputs chosen by packaging	B-R14	Farmer Info Features	B-G32, B-G33, B-G34, B-G35, B-G59, B-G60, B-G80, B-G100, B-G156			
B - P	Organic agricultural, because of health concern	B-G14	Organic agricultural, because of health concern	B-R15	Promotion of Farmer Info	B-G36, B-G115, B-G117			

15									
B - P16	No higher price for organic products at local market due to consumers attitude	B-G15	No higher prices for organic products	B-R16	Limitations of Farmer Info	B-G37, B-G83, B-G106, B-G108, B-G111			
B - P17	Supermarket as marketing channel difficult due to lack of packaging	B-G16	Marketing via supermarkets difficult	B-R17	Chemical agriculture	B-G47, B-G123			
B - P18	Production per season or year unknown, products are consumed or sold right away	B-G7	No recording of agricultural activities	B-R18	Agricultural assistance	B-G46, B-G50, B-G53			
B - P19	Pests the biggest problem during one season	B-G17	Pest problems	B-R19	Call center for farmers	B-G58, B-G105			
B - P20	No knowledge about plant protection	B-G5	Poor agricultural experience	B-R20	RBK	B-G85, B-G89, B-G93, B-G94, B-G95, B-G137, B-G142			
B - P21	Agricultural more as a hobby to ensure food safety due to organic inputs	B-G5	Poor agricultural experience	B-R21	Smart Farmer Concept	B-G87, B-G98, B-G99, B-G101, B-G114			
B - P22	Agricultural knowledge from parents, farming as a hobby	B-G5	Poor agricultural experience	B-R22	SMS service for farmers	B-G88, B-G90, B-G91, B-G102, B-G103, B-G119			
B - P	Pest management most important information, need for training	B-G18	Pest management knowledge needed	B-R23	E-commerce for farmers	B-G96, B-G97, B-G144			

2 3									
B - P 2 2 4	Price concerns, increase of price desirable	B- G19	Low prices as problem	B- R2 4	Cooperation between stakeholders	B-G112			
B - P 2 2 5	Knowledge for pest management and about price from other organic farmers and restaurants	B- G20	Knowledge sharing with other farmers	B- R2 5	Smart Farmer's Future	B-G113, B-G116, B-G143, B-G147			
B - P 2 2 6	No personal use of RBK helpline, but call for other farmers to help with problems	B- G20	Knowledge sharing with other farmers	B- R2 6	CSR strategy	B-G118, B-G140, B-G141, B-G154			
B - P 2 2 7	First mobile phone 20 years ago, last phone one year old costing 20 000 Baht	B- G21	Good experience with phones	B- R2 7	Young Farmer Project	B-G121, B-G128, B-G129, B-G130			
B - P 2 2 8	First smartphone 4 years ago, changing frequently as device becomes slow	B- G22	Good experience with smartphones	B- R2 8	Role of farmers	B-G136, B-G139, B-G148, B-G149			
B - P 2 2 9	Both are dtac customers, paying 1 000 Baht per month for service	B- G23	High monthly phone costs	B- R2 9	Satisfaction with Farmer Info	B-G151, B-G154, B-G155, B-G157			
B - P 3 3 0	dtac best provider in the area	B- G24	dtac best provider in the area						
B - P	First difficulties to use smartphone, but now easy to use	B- G25	Difficulty to use at the beginning, later easy						

3 1									
B - P 3 2	On time information and convenience as most important features of smartphones	B- G26	Convenience most important feature of smartphones						
B - P 3 3	4 hours per day using smartphone		Marked as insignificant.						
B - P 3 4	Using application since one year after being approached by RBK	B- G27	One year experience with Farmer Info App						
B - P 3 5	Using application three to four times a week	B- G28	Frequently using Farmer Info						
B - P 3 6	No training on application from RBK	B- G29	No training						
B - P 3 7	Application at the beginning confusing, so training would have been better	B- G30	Application confusing, need for training						
B - P 3 8	Approached by Rak Ban Kerd because of his job in disaster management		Marked as insignificant.						
B - P	Not using the SMS service before	B- G31	No experience with RBK services						

39									
B - P 40	Video most important feature of application	B-G32	Video most important in application						
B - P 41	Videos are easy to understand and provide step-by-step guides, which is more helpful than reading, for example for cost reduction in pesticide use	B-G33	Videos provide useful and understandable information						
B - P 42	Market price not useful as area is not covered by application	B-G34	Price comparing not useful						
B - P 43	E-commerce not useful as it is difficult to transport fresh products	B-G35	E-commerce not useful						
B - P 44	No improvements of application required, but promotion among people necessary to improve knowledge sharing	B-G36	Promotion of application needed						
B - P 45	Other people using application out of interest but are not engaged in agriculture		Marked as insignificant.						
B - P 46	Improving coverage of application, including more markets in the area as closest market is still too far to sell small quantity profitable	B-G37	App coverage of markets poor						
B - P	Interviewees are age 48 and 18		Marked as insignificant.						

4 7									
B - P 4 8	Born in this area and 57 years old		Marked as insignificant.						
B - P 4 9	Growing pomelo, also for export to European and Asian countries	B- G38	Marketing via export						
B - P 5 0	Switching from maize to pomelo after chemical fertilizer company promoted the cultivation	B- G39	Pomelo cultivation						
B - P 5 1	Land area of 20-30 rai	B- G40	Land area of 20-30 rai						
B - P 5 2	Change to pomelo production after seeing the benefits of neighbour	B- G39	Pomelo cultivation						
B - P 5 3	Group for pomelo farmers	B- G41	Grouping for knowledge exchange						
B - P 5 4	40-50 000 Baht per month from agricultural production and to some extent from small shop	B- G42	High agricultural income						
B - P	Giving advice and selling products to other farmers	B- G20	Knowledge sharing with other farmers						

6 3									
B - P 6 4	Seedlings from farmers in Nakhon Phratum Province	B- G20	Knowledge sharing with other farmers						
B - P 6 5	Hard to change to organic production when growing pomelos	B- G48	Difficulties to change to organic production						
B - P 6 6	Market for organic pomelos in exporting countries unstable	B- G49	Markets unstable for organic products						
B - P 6 7	11 tons per year of yield		Marked as insignificant.						
B - P 6 8	Awards for reliability and processing, including from Rak Ban Kerd	B- G50	Award from Rak Ban Kerd						
B - P 6 9	Selling products by phone order and send by post	B- G51	Marketing via phone						
B - P 7 0	Greening disease major problem in cultivation	B- G52	Disease as major problem						
B - P	Help from university regarding insecticides	B- G53	Assistance from universities						

7 1									
B - P 7 2	Pest and disease information most important, but this year also water shortage	B- G54	Pest and disease information most important, but this year also water shortage						
B - P 7 3	World market price and price in exporting countries currently a problem, but can cope due to expected higher prices in Thailand	B- G55	Low world market prices as problem						
B - P 7 4	First smartphone last year for 7 000 Baht, first mobile phone over 15 years ago, currently spending between 400-900 Baht per month on services, mainly using LINE application	B- G21	Good experience with phones						
B - P 7 5	Smartphone difficult to use at the beginning but daughter taught how to use	B- G25	Difficulty to use at the beginning, later easy						
B - P 7 6	Direct consumer contact via LINE application best feature of smartphone, including sending pictures	B- G56	Marketing and B2C via social media						
B - P 7 7	Middleman and consumer communication via LINE, in country shipping via post, export is handled by middleman	B- G56	Marketing and B2C via social media						
B - P 7 8	No use of Farmer Info application	B- G57	No use of Farmer Info application						
B - P	Works with RBK on helpline, providing information for pomelo farmers via phone	B- G58	Connected to RBK through helpline						

7 9									
B - P 8 0	Interest in application, but not promotion or training	B- G29	No training						
B - P 8 1	Knowledge sharing would be most important feature for an application, weather or price less important but still good to know if offered	B- G59	Knowledge sharing most important feature						
B - P 8 2	Picture with description would be best way to provide knowledge	B- G60	Picture with description would be best way to provide knowledge						
B - P 8 3	Born in the area, 59 years old		Marked as insignificant.						
B - P 8 4	Rice as major crop with harvest two times year	B-G3	Agricultural produce cultivated						
B - P 8 5	Vegetable production in homegarden	B-G3	Agricultural produce cultivated						
B - P 8 6	150 000 Baht per year from rice and 8 to 9 000 Baht from homegarden		Marked as insignificant.						
B - P	Educational background is "Ausbildung"	B-G2	Educational Background						

8 7									
B - P 8 8	Back in agriculture since 14 years	B- G61	Long agricultural experience						
B - P 8 9	Professional experience in banking	B- G10	Education and professional experience						
B - P 9 0	Back into agriculture because of boredom, having experience in agriculture through parents	B- G62	Parents engaged in agriculture						
B - P 9 1	Land from parents	B- G63	Land owned by parents						
B - P 9 2	After working in Bangkok, happy to be back in agriculture being independent and not employeeed	B- G64	Agriculture provides independence						
B - P 9 3	Experience from banking, in particular loan, helps to analyse the market and give advice to other farmers how to receive loans	B- G20	Knowledge sharing with other farmers						
B - P 9 4	Farm should stay in family		Marked as insignificant.						
B - P	Marketing of rice via mill with no governmental support, resulting in unstable market	B- G65	Marketing via rice mill, middleman						

95									
B - P 96	Marketing of homegarden products via local markets with increasing demand from consumers	B-G9	Marketing via local market						
B - P 97	Additional fruit production along the rice fields with two fish ponds for additional income	B-G3	Agricultural produce cultivated						
B - P 98	Initiator of an organic farmer group	B-G66	Organic farmer						
B - P 99	Founding of group as a result of health concerns regarding the use of chemical inputs	B-G14	Organic agricultural, because of health concern						
B - P 100	Totally producing organically	B-G66	Organic farmer						
B - P 101	Previously own factory for organic inputs, but decreasing interest of youth in organic cultivation and more interest in chemicals, resulting in closure	B-G48	Difficulties to change to organic production						
B - P 102	Besides health issues, higher prices and high demand major reasons for organic production, providing approximately a 10% higher price	B-G67	Higher prices for organic						

B - P 1 0 3	Rice production only organic for home consumption	B- G66	Organic farmer						
B - P 1 0 4	Rice production for mill with chemical fertilizer as full organic production would be too cost intensive for the small farm size	B- G47	Use of chemical inputs						
B - P 1 0 5	Main problem in agriculture is declining number of workers as the younger generation moves to the cities	B- G68	Main problem is lack of workers						
B - P 1 0 6	Most of the work can be covered by family, but for rice machines and workers are required	B- G68	Main problem is lack of workers						
B - P 1 0 7	Closing or lack of agriculture focused universities and practical centers as reason for low interest of youth in agriculture, difficult to bring them back		Marked as insignificant.						
B - P 1 0 8	Agriculture as a safety net in times of crisis	B- G69	Agriculture as safety net						
B - P 1	Promote agriculture, developing infrastructure and providing knowledge to bring the youth back to agriculture	B- G70	Promoting agriculture necessary						

0									
9									
B	No severe problems with pest and diseases	B-	No severe problems with						
-		G71	pest and diseases						
P									
1									
1									
0									
B	Water shortage a annual problem to lack of irrigation	B-	Water shortage main						
-		G72	problem						
P									
1									
1									
1									
B	Price fluctuation over the years another problem, also	B-	Unstable markets as						
-	keeping the younger generation away and related to	G73	problem						
P	politics								
1									
1									
2									
B	Organic vegetable prices more stable, providing a	B-	Organic prices more						
-	stable livelihood	G74	stable						
P									
1									
1									
3									
B	Marketing via supermarkets difficult due to the large	B-	Marketing via						
-	quantities required	G16	supermarkets difficult						
P									
1									
1									
4									
B	Lack of professional extension workers and lack of	B-	Lack of knowledge and						
-	knowledge requires personal information search via	G75	professional workers						
P	other medias								
1									
1									
5									
B	Traveling required to attain meetings and gain		Marked as insignificant.						
-	knowledge and information, but worth to do								

P 1 1 6									
B - P 1 1 7	Age as a reason to stop attending meetings and traveling		Marked as insignificant.						
B - P 1 1 8	0 to 2000 Baht per each training including travel, accommodation and food		Marked as insignificant.						
B - P 1 1 9	Agricultural training by private organizations mainly before harvest, from government after harvest and from professional workers when there is need from the farmers	B- G76	Agricultural information not always on time						
B - P 1 2 0	No problems with post-harvest losses	B- G77	No problems with post-harvest losses						
B - P 1 2 1	First mobile phone 30 years ago switching to smartphone 2-5 years ago	B- G21	Good experience with phones						
B - P 1 2 2	Cost for last smartphone almost 5 000 Baht with monthly costs of around 800 Baht mainly for internet	B- G23	High monthly phone costs						

B - P 1 2 3	Smartphone difficult to use at the beginning, but later easy and particular the internet access a major advantage over the basic phone	B-G25	Difficulty to use at the beginning, later easy						
B - P 1 2 4	Internet the most important feature of smartphones, using the phone approximately two hours a day	B-G78	Internet most important feature of smartphones						
B - P 1 2 5	User of application since one year after receiving training	B-G27	One year experience with Farmer Info App						
B - P 1 2 6	Using the application twice a day, morning and evening, as content is limited	B-G83	More frequent content for app needed						
B - P 1 2 7	User of SMS-service before	B-G79	Experience with SMS service						
B - P 1 2 8	Application is more convenient than the SMS-service	B-G26	Convenience most important feature of smartphones						
		B-G80	Application is more convenient than the SMS-service						
B	Not using the helpline		Marked as insignificant.						

- P 1 2 9									
B - P 1 3 0	Video as best feature of application, providing a variety of quick and easy understandable information	B- G32	Video most important in application						
		B- G33	Videos provide useful and understandable information						
B - P 1 3 1	Using videos to gain knowledge, collected in a book, to maybe use it later or share with other farmers in the region	B- G20	Knowledge sharing with other farmers						
B - P 1 3 2	Never used a particular advice from the videos on the field	B- G32	Video most important in application						
B - P 1 3 3	Most farmers using AIS	B- G81	AIS dominating mobile provider						
B - P 1 3 4	Farmers use AIS as change to other provider would take three days	B- G81	AIS dominating mobile provider						
B -	Use of price checking tool but no incentive and old age to move to other markets than the local village	B- G34	Price comparing not useful						

P 1 3 5	market								
B - P 1 3 6	Marketing of homegarden via Facebook is planned but no use for RBK's e-commerce	B- G56	Marketing and B2C via social media						
B - P 1 3 7	Help from child required for any work with ICTs	B- G25	Difficulty to use at the beginning, later easy						
B - P 1 3 8	New marketing idea, giving people the possibility to harvest their products by themselves in the home garden for a cheaper price	B- G82	Innovative marketing						
B - P 1 3 9	Application should be improved by providing information more frequently	B- G83	More frequent content for app needed						
B - P 1 4 0	No need to add more features in the application	B- G84	Information in app sufficient						
B - P 1 4 1	Organic agricultural advices in the application close to the farmer's practices and should be easy to understand by other farmers, new to organic cultivation	B- G33	Videos provide useful and understandable information						

B - P 1 4 2	Contribution to RBK's services via radio and video		Marked as insignificant.						
B - P 1 4 3	RBK is non-profit organisation	B- G85	RBK non-profit organisation						
B - P 1 4 4	dtac supports RBK financially	B- G86	dtac supports RBK						
B - P 1 4 5	Main work of RBK and their workers is to collect and edit data before launching through various channels	B- G87	Collecting and launching of various data						
B - P 1 4 6	Dtac works with radio station while RBK is not		Marked as insignificant.						
B - P 1 4 7	Work at RBK since 2005		Marked as insignificant.						
B - P 1	SMS-service was launched in 2003 nationwide for dtac customers	B- G88	Introduction of SMS service 2003						

48									
B- P149	Mr. Boonchai is chairman of dtac and started Rak Ban Kerd	B-G89	dtac and RBK involved via chairmain						
B- P150	Interviewee has agricultural experience and is interested in agriculture		Marked as insignificant.						
B- P151	SMS project was started by Rawat Sangchuay and his team to reach the poor people in Thailand	B-G90	SMS project to help the poor						
B- P152	Start of SMS project after realizing the increase of mobile phone users in Thailand and their potential for agricultural content distribution	B-G91	SMS service consequence of mobile increase						
B- P153	Launch of application five years ago in one line with the increase of smartphone users	B-G92	App consequence of smartphone increase						
B- P154	Focus of RBk at the beginning on scholarships for talented students	B-G93	RBK initially for scholarships						
B-	Focus of RBk on agriculture later to improve the situation of Thai farmers	B-G94	RBK focus on farmers life						

P 1 5 5									
B - P 1 5 6	RBK divided into foundation and company both working on the provided services		Marked as insignificant.						
B - P 1 5 7	Besides RBK services, they also have and promote their own brand	B- G95	RBK has brand						
B - P 1 5 8	Currently ten products under own brand		Marked as insignificant.						
B - P 1 5 9	Over 1000 products from Thailand on e-commerce website		Marked as insignificant.						
B - P 1 6 0	E-commerce very efficient and suitable for farmers	B- G96	RBK e-commerce useful for farmers						
B - P 1 6 1	Promotion of e-commerce on village and community level	B- G97	Promotion of e-commerce for farmers						

B - P 1 6 2	E-commerce is only a platform, farmers and consumers can communicate directly and make a contract	B-G96	RBK e-commerce useful for farmers						
B - P 1 6 3	SMS service was started after over 1000 farmers were invited to provide feedback on their needs and the largest agreement was on improvement of livelihood situation	B-G98	Services developed after analysing farmers needs						
B - P 1 6 4	A better livelihood through higher prices by comparing them is the main goal of SMS service and application	B-G99	Improving livelihood through price comparing						
B - P 1 6 5	Most interesting data is about price checking with regular updates and a continuous collection of data	B-G100	Price tool most interesting feature						
B - P 1 6 6	Duty of farmers is to compare the prices		Marked as insignificant.						
B - P 1 6 7	Price fluctuation and development over time is also possible to check on the website as data is stored long in RBK's servers		Marked as insignificant.						
B - P 1	Improvement of livelihood situation of farmers as main goal	B-G101	Improving of livelihood						

6 8									
B - P 1 6 9	Success stories on the SMS-service provide proof about how it can influence the livelihood of farmers	B- G102	Impact of SMS service profen						
B - P 1 7 0	Around 200 000 SMS users	B- G103	Around 200 000 SMS users						
B - P 1 7 1	Around 100 000 application users	B- G104	Around 100 000 application users						
B - P 1 7 2	dtac users can also call helpline to get agricultural information provided by trained staff or experts in the field	B- G105	CALL center providing information on demand						
B - P 1 7 3	service limited to dtac customers as Mr. Boonchai is chairman of dtac and founder of RBK and dtac funds RBK	B- G106	Service limited to dtac customers						
B - P 1 7 4	Data is collected in the field, edited in Bangkok and then launched through all channels to the farmers	B- G87	Collecting and launching of various data						
B -	Agricultural knowledge and information is collected from farmers, best practice farmers on a variety of	B- G87	Collecting and launching of various data						

P 1 7 5	aspects								
B - P 1 7 6	Market prices are collected every morning from selected markets	B- G87	Collecting and launching of various data						
B - P 1 7 7	Collecting of farmer knowledge through text, video and interviews	B- G87	Collecting and launching of various data						
B - P 1 7 8	Organic agriculture as a second goal	B- G107	Organic agriculture as second goal						
B - P 1 7 9	Collecting of data on organic farming	B- G107	Organic agriculture as second goal						
B - P 1 8 0	Services cover 40 provinces in Thailand with seven local teams	B- G108	Services coverage						
B - P 1 8 1	RBK teams responsible for field work on data collection and contact with farmers	B- G87	Collecting and launching of various data						

B - P 1 8 2	Training of farmers on use of services, including application and e-commerce	B- G109	Training of farmers						
B - P 1 8 3	One part of farmers very positive about services, in particular about the ease of use	B- G110	Services easy to use						
B - P 1 8 4	Other farmers have negative experiences particularly about the difficulty of use	B- G111	Services difficult to use						
B - P 1 8 5	Training of farmers on use of smartphones and internet by dtac and RBK	B- G109	Training of farmers						
B - P 1 8 6	Cooperation with the Ministry of Agriculture and Cooperatives as well as the Farmer Bank	B- G112	Cooperation with other stakeholders						
B - P 1 8 7	Knowledge between dtac, RBK and MOAC, Farmer Bank on a regular basis despite different agendas	B- G112	Cooperation with other stakeholders						
B - P 1	MOAC suggest RBK to produce the services as their officers are not as skilled as the ones from RBK	B- G112	Cooperation with other stakeholders						

8 8									
B - P 1 8 9	Happy with current development but still improvements necessary, including expanding price information	B- G113	Improvement of services required						
B - P 1 9 0	Extending product range in e-commerce		Marked as insignificant.						
B - P 1 9 1	Focus on water consumption and saving due to current drought	B- G114	Season goal water consumption reduction						
B - P 1 9 2	Local promotion and training required to increase awareness of application among farmers, in particular as SMS service will be cancelled	B- G109	Training of farmers						
B - P 1 9 3	Promotion of services is duty of dtac	B- G115	Promotion of services						
B - P 1 9 4	20 to 30 million Baht funding from dtac yearly for all expanses of RBK	B- G86	dtac supports RBK						
B -	No cooperation with other mobile phone providers allowed through dtac policy	B- G112	Cooperation with other stakeholders						

P 1 9 5									
B - P 1 9 6	Website open to everyone	B- G106	Service limited to dtac customers						
B - P 1 9 7	SMS and app only for dtac users	B- G106	Service limited to dtac customers						
B - P 1 9 8	Large market share of dtac but network of AIS in rural areas sometimes better, dtac is going to invest in infrastructure		Marked as insignificant.						
B - P 1 9 9	Short-term focus of project on water situation and how to cope with shortages	B- G114	Season goal water consumption reduction						
B - P 2 0 0	Long-term vision includes simplifying application, re-branding and maybe adding of information	B- G116	Further development of application						
B - P 2 0 1	Weather information will be added to applicaiton	B- G116	Further development of application						

B - P 2 0 2	All services are for free for dtac customers	B- G106	Service limited to dtac customers						
B - P 2 0 3	Training and internet promotion by RBK not only for dtac customers but explaining the usefulness of being dtac customer including the free access to the RBK services	B- G117	Promotion of services to all Thais						
B - P 2 0 4	Promotion of RBK's services among all farmers and how they can access, such as subscribing with dtac	B- G117	Promotion of services to all Thais						
B - P 2 0 5	MoU with Deparmetn of Agriculture to identify more best practice farmers or Smart Farmers, in particular young ones	B- G112	Cooperation with other stakeholders						
B - P 2 0 6	Farmers are overwhelmed by data so simplification is necessary	B- G116	Further development of application						
B - P 2 0 7	More support from government under Thailand 2020 framework	B- G112	Cooperation with other stakeholders						
B - P 2	Mr. Praphan, head of CSR dtac		Marked as insignificant.						

08									
B-209	Nim working for Smart Farmer Project		Marked as insignificant.						
B-210	dtac has commitment to bring the benefits of ICTs to Thai society	B-G118	CSR strategy on ICTs for Thais						
B-211	dtac started project with RBK in 2008 to help Thai farmers with their financial situation	B-G118	CSR strategy on ICTs for Thais						
B-212	SMS service first part of cooperation between dtac and RBK	B-G89	dtac and RBK involved via chairmain						
		B-G118	CSR strategy on ICTs for Thais						
B-213	Sponsoring of call center, helpline, of RBK to provide information access	B-G86	dtac supports RBK						
B-214	250 000 SMS users	B-G119	250 000 SMS users						

B - P 2 1 5	Application as consequence of previous services to provide more complex information	B-G120	Application as consequence of previous services to provide more complex information						
B - P 2 1 6	Since 2015 focus less on all Thai farmers but promote more younger farmers to turn them into smart farmers	B-G118	CSR strategy on ICTs for Thais						
		B-G121	Focus on young farmers						
B - P 2 1 7	Young farmers are between 17 and 45 and are identified by the Department of Agricultural Extension	B-G121	Focus on young farmers						
B - P 2 1 8	Survey among young farmers confirms interest in non-chemical farming and innovations	B-G122	Interest in organic agriculture						
B - P 2 1 9	Old farmers are more depending on chemicals	B-G123	Old farmers are more depending on chemicals						
B - P 2 2 0	Young farmers are financially independent	B-G124	Young farmers are financially independent						
B -	Traditional farmers have often financial problems	B-G125	Traditional farmers have often financial problems						

P 2 2 1									
B - P 2 2 2	Young farmers already aware of internet	B- G126	Young farmers already aware of internet						
B - P 2 2 3	Traditional farmers are not internet users	B- G127	Traditional farmers are not internet users						
B - P 2 2 4	Internet will help young farmers to be more efficient and improve their practices	B- G128	Internet for more efficiency and independence						
B - P 2 2 5	Young farmers often with higher education		Marked as insignificant.						
B - P 2 2 6	Curriculum developed for young farmers to train them in farming activities	B- G121	Focus on young farmers						
B - P 2 2 7	Cooperation with Department of Agricultural Extension and Bank of Agriculture	B- G112	Cooperation with other stakeholders						

B - P 2 2 8	dtac's responsibility for young farmers is to train them in online marketing	B-G121	Focus on young farmers						
B - P 2 2 9	dtac is responsible to provide young farmers with marketing content and techniques	B-G121	Focus on young farmers						
B - P 2 3 0	dtac sets up LINE groups to enhance communication with farmers and between them	B-G121	Focus on young farmers						
B - P 2 3 1	Mobile application and learning will lead to improved farming and innovation	B-G129	Improved farming and innovation through ICTs						
B - P 2 3 2	Increase of productivity and income through young farmer training	B-G130	Increase of productivity and income through training						
B - P 2 3 3	Knowledge sharing of young farmers with community is desired		Marked as insignificant.						
B - P 2	RBK e-commerce too difficult for farmers	B-G35	E-commerce not useful						

3 4									
B - P 2 3 5	Facebook easiest form of online marketing	B- G131	Marketing via social media						
B - P 2 3 6	E-commerce by RBk too difficult for the farmers	B- G35	E-commerce not useful						
B - P 2 3 7	Improvement of e-commerce by RBK won'T be useful if farmers attitudes are not understand	B- G35	E-commerce not useful						
B - P 2 3 8	Educate farmers first on e-commerce with e.g. Facebook before using complex e-commerce website such as RBK	B- G132	Training of farmers needed						
B - P 2 3 9	Focus on young farmers as they are most promising and can spread knowledge in the community	B- G121	Focus on young farmers						
B - P 2 4 0	No support from government but cooperation on the subject of young farmer training	B- G112	Cooperation with other stakeholders						
B -	Agricultural hub for smartphone as a collection of useful application for young farmers	B- G133	Collection of agricultural apps useful						

P 2 4 1									
B - P 2 4 2	Agricultural hub will include farmer information application and various others for soil treatment e.g.	B-G133	Collection of agricultural apps useful						
B - P 2 4 3	Use of applications free of charge	B-G106	Service limited to dtac customers						
B - P 2 4 4	Farmer Info application belongs to RBK and dtac only is the sponsor and provider of technology	B-G86	dtac supports RBK						
B - P 2 4 5	Around 70 000 application users	B-G134	Around 70 000 application users						
B - P 2 4 6	Promotion of application via LINE and Facebook	B-G115	Promotion of services						
B - P 2 4 7	Criticism of RBK app development and technology	B-G135	Criticism of RBK app development and technology						

B - P 2 4 8	Criticism of coverage of app, only including some not all provinces	B-G108	Services coverage						
B - P 2 4 9	Training necessary to introduce farmers to new ICTs and their possibilities	B-G132	Training of farmers needed						
B - P 2 5 0	Voluntary teams nationwide by dtac to train and promote	B-G132	Training of farmers needed						
B - P 2 5 1	Survey to track success of projects necessary to improve services in the future and help young farmers		Marked as insignificant.						
B - P 2 5 2	ICTs provide an opportunity to bring young farmers back in agriculture by providing knowledge and assistance for a now higher educated youth	B-G121	Focus on young farmers						
B - P 2 5 3	Young farmers are more organic and consumer oriented but are missing deep knowledge	B-G122	Interest in organic agriculture						
B - P 2	Biggest problem of training or educating farmers is that dtac cannot handle it alone	B-G112	Cooperation with other stakeholders						

54									
B - P 2 5 5	dtac needs more partners to fully succeed in their commitment	B- G112	Cooperation with other stakeholders						
B - P 2 5 6	Other mobile operations not as partners as competition is high	B- G112	Cooperation with other stakeholders						
B - P 2 5 7	More government support need and lower regulations	B- G112	Cooperation with other stakeholders						
B - P 2 5 8	Cooperation with private companies particular in the field of organic products desirable	B- G112	Cooperation with other stakeholders						
B - P 2 5 9	Farmers should be independent from companies, such as input retailers	B- G136	Promoting farmers independence						
B - P 2 6 0	Supratana Bencharongkul, 35 years, working as Chief Operating Officer at RBK		Marked as insignificant.						
B -	Daughter of Mr. Boonchai involved in RBK and dtac for a long time but working their since 4 years		Marked as insignificant.						

P 2 6 1									
B - P 2 6 2	At the beginning no connection with RBK and its work including no experience in the field		Marked as insignificant.						
B - P 2 6 3	Responsible for everything		Marked as insignificant.						
B - P 2 6 4	RBK as a middleman, intermediary between farmers and consumers	B- G137	RBK middleman for farmer						
B - P 2 6 5	dtac calls itself sustainable with a CSR team	B- G118	CSR strategy on ICTs for Thais						
B - P 2 6 6	Mr. Boonchai initiated RBK to provide farmers with the benefits of new markets and technologies	B- G89	dtac and RBK involved via chairman						
B - P 2 6 7	First step for the project and its services is the data collection , such as number and videos, in the provinces by volunteers and workers ewll connect to government	B- G87	Collecting and launching of various data						

B - P 2 6 8	Farmers like to watch videos and respect the government	B-G32	Video most important in application						
B - P 2 6 9	Government often does not understand business side of operations	B-G138	Government often does not understand business side of operations						
B - P 2 7 0	RBK needs support from government and best practice farmers to build credibility	B-G112	Cooperation with other stakeholders						
B - P 2 7 1	RBK responsible for data collection and evaluation, the design of the services as well as handling the feedback from users	B-G87	Collecting and launching of various data						
B - P 2 7 2	Feedback from farmer through call center	B-G87	Collecting and launching of various data						
B - P 2 7 3	Understanding farmers and thinking like farmers is essential to provide the best services and fit the needs of farmers	B-G139	Understanding farmers essential						
B - P 2	Information on future market developments from ministries and experience	B-G112	Cooperation with other stakeholders						

7 4									
B - P 2 7 5	No help or ideas from other projects or countries, all from own experience		Marked as insignificant.						
B - P 2 7 6	RBK services base only on Mr. Boonchai's ideas	B- G89	dtac and RBK involved via chairmain						
B - P 2 7 7	Future development of application will divided agricultural information in regional categories	B- G116	Further development of application						
B - P 2 7 8	dtac only sponsor of application, promoting it via various channels	B- G86	dtac supports RBK						
B - P 2 7 9	Application provides dtac with good image of being kind	B- G118	CSR strategy on ICTs for Thais						
B - P 2 8 0	dtac hopes to make farmer use the internet to increase their income and to spend more on other things	B- G141	Hidden agenda of dtac						
B -	Application benefits all parties involved	B- G140	Win-win situation through application						

P 2 8 1									
B - P 2 8 2	RBK to fulfill Mr. Boonchai's overall picture or vision	B- G89	dtac and RBK involved via chairmain						
B - P 2 8 3	Aim of RBk sustainability and make farmers rich by being involved in their live	B- G142	Goal of RBK						
B - P 2 8 4	Make them rich and we get rich	B- G141	Hidden agenda of dtac						
B - P 2 8 5	Aim is to increase farmers income	B- G101	Improving of livelihood						
B - P 2 8 6	Convenient store of RBK failed		Marked as insignificant.						
B - P 2 8 7	Main goal is to raise the income	B- G101	Improving of livelihood						

B - P 2 8 8	Rice mill of RBK failed too		Marked as insignificant.						
B - P 2 8 9	Smartphones as the the final solution to improve farmers livelihood through new market access	B-G92	App consequence of smartphone increase						
B - P 2 9 0	Website needs further development to be more attractive useful	B-G143	Further development of website						
B - P 2 9 1	Recently huge increase of transactions on the e-commerce platform	B-G144	Increase of e-commerce use						
B - P 2 9 2	No profit out of e-commerce for RBK	B-G85	RBK non-profit organisation						
B - P 2 9 3	Right pricing of online products important to compete with supermarkets		Marked as insignificant.						
B - P 2	E-commerce build like Amazon		Marked as insignificant.						

9 4									
B - P 2 9 5	Own brand of RBK, particular for rice	B- G95	RBK has brand						
B - P 2 9 6	Organic rice of RBK as an example for farmers	B- G95	RBK has brand						
B - P 2 9 7	Online platform for local products and their promotion	B- G96	RBK e-commerce useful for farmers						
B - P 2 9 8	Organic rice not widely accepted	B- G145	Organic rice not widely accepted						
B - P 2 9 9	Promoting local products more and make them special	B- G146	Promoting local products						
B - P 3 0 0	Short term plans are to make the services more userfriendly	B- G147	More userfriendly service						
B -	Long -term plans focus on e-commerce and website development for better promotion of Thai products	B- G143	Further development of website						

P 3 0 1	and culture								
B - P 3 0 2	Increase market access through e-commerce by adding English language	B-G96	RBK e-commerce useful for farmers						
B - P 3 0 3	Licencing for RBK huge problem		Marked as insignificant.						
B - P 3 0 4	RBK as a middleman between farmer and consumer	B-G137	RBK middleman for farmer						
B - P 3 0 5	Short term plan for application is dividing it into regions to help users choose topics	B-G116	Further development of application						
B - P 3 0 6	Dividing application in regions will be more user friendly and helpful but will require a huge data collection to provide useful information to all farmers	B-G147	More userfriendly service						
B - P 3 0 7	Making the application more user-friendly in the future, including GPS functions	B-G147	More userfriendly service						

B - P 3 0 8	Necessary to simplify application and information but still provide essentials to farmers	B- G147	More userfriendly service						
B - P 3 0 9	Name of application still confusing for farmers as it is in English		Marked as insignificant.						
B - P 3 1 0	Application should be simple not like website	B- G147	More userfriendly service						
B - P 3 1 1	Geographical identification as a key to benefit farmers	B- G146	Promoting local products						
B - P 3 1 2	Change in politics does not guarantee continuous development in one area	B- G112	Cooperation with other stakeholders						
B - P 3 1 3	Best practice farmers important to inspire other farmers	B- G148	Farmers important for overall development						
B - P 3	Working closely with governmental institutions	B- G112	Cooperation with other stakeholders						

14									
B - P 315	Cooperation with agricultural companies desired to promote sustainable income for farmers through local production	B-G112	Cooperation with other stakeholders						
B - P 316	RBK depends on companies supporting them	B-G112	Cooperation with other stakeholders						
B - P 317	Royal Project makes it too easy for farmers		Marked as insignificant.						
B - P 318	Farmers should be business persons	B-G149	Farmers should be business persons						
B - P 319	Royal Project is a good project but not sustainable in long term as it does not promote the independence of farmers	B-G136	Promoting farmers independence						
B - P 320	Improvement of livelihood situation has to come from the farmers themselves without being satisfied with the status quo	B-G101	Improving of livelihood						
B -	Website as a main goal for future development plans, developing a knowledge and culture online hub	B-G143	Further development of website						

P 3 2 1									
B - P 3 2 2	E-commerce should sustain local businesses of farmers in the future competing with bigger companies	B-G96	RBK e-commerce useful for farmers						
B - P 3 2 3	No support from the government, even sometimes acts against business interests	B-G112	Cooperation with other stakeholders						
B - P 3 2 4	Governments should focus on the basics and support businesses in their commitment for the countries development	B-G112	Cooperation with other stakeholders						
B - P 3 2 5	Privatization over nationalisation		Marked as insignificant.						
B - P 3 2 6	Government should not compete with private sector, e.g. in the telecommunication sector	B-G150	Privatization over nationalisation						
B - P 3 2 7	Despite small hindrances, development in the last year good and satisfying	B-G151	Good development						

B - P 3 2 8	Application has a lifespan and is only the first step to develop farmers' knowledge and skills, later the worldwide web will provide them more information	B- G152	App only one milestone						
B - P 3 2 9	Application only a tool to get farmers used to the internet and get hooked on it	B- G152	App only one milestone						
B - P 3 3 0	RBK's advantage over governments price distribution is the verification of the truth of the prices		Marked as insignificant.						
B - P 3 3 1	Lady in Pattaya was taught in application use and found out that she was cheated by a company in terms of selling prices after comparing the prices on the application	B- G100	Price tool most interesting feature						
B - P 3 3 2	New market access desired by farmers as current marketing channels are not enough	B- G153	New market channels required						
B - P 3 3 3	Marketing channels for farmers not sufficient	B- G153	New market channels required						
B - P 3	Difficulties to sell all produce	B- G153	New market channels required						

3 4									
B - P 3 3 5	Difficulties in teaching farmers the use of smartphones	B- G25	Difficulty to use at the beginning, later easy						
B - P 3 3 6	At the beginning no use of smartphones for farmers	B- G25	Difficulty to use at the beginning, later easy						
B - P 3 3 7	Farmers used to basic phones	B- G25	Difficulty to use at the beginning, later easy						
B - P 3 3 8	Over time ease of use regarding smartphones	B- G25	Difficulty to use at the beginning, later easy						
B - P 3 3 9	Over time getting used to smartphones	B- G25	Difficulty to use at the beginning, later easy						
B - P 3 4 0	Linking smartphone symbols to known symbols, such as comparing the button for receiving a phone call with a buffalo horn	B- G25	Difficulty to use at the beginning, later easy						
B -	Use of LINE to send pictures to customers and be in direct contact with them	B- G131	Marketing via social media						

P 3 4 1									
B - P 3 4 2	Increasing interest in online marketing, in particular using social media	B-G131	Marketing via social media						
B - P 3 4 3	Use of LINE to improve B2C communication	B-G131	Marketing via social media						
B - P 3 4 4	Internet widens distribution channel	B-G153	New market channels required						
B - P 3 4 5	Price comparing via smartphones	B-G100	Price tool most interesting feature						
B - P 3 4 6	Limitation to dtac customers	B-G106	Service limited to dtac customers						
B - P 3 4 7	Application only part of a big CSR strategy of dtac	B-G118	CSR strategy on ICTs for Thais						

B - P 3 4 8	Only dtac customers as users	B- G106	Service limited to dtac customers						
B - P 3 4 9	Good app for Thai society and example for other companies	B- G154	Application good example for other companies						
B - P 3 5 0	More information on certain products needed	B- G83	More frequent content for app needed						
B - P 3 5 1	Great app for new farmers	B- G155	Good for new farmers						
B - P 3 5 2	Useful free application	B- G157	Useful free application						
B - P 3 5 3	Application provides useful information which can be used in daily life	B- G157	Useful free application						
B - P 3	Narrow minded as app is only for dtac customers	B- G106	Service limited to dtac customers						

54									
B - P 3 5 5	App should be accessible via other networks too	B- G106	Service limited to dtac customers						
B - P 3 5 6	Broad variety of information on applicaiton	B- G156	Broad variety of information on applicaiton						
B - P 3 5 7	Good and useful application for THais	B- G157	Useful free application						
B - P 3 5 8	Good application providing day by day information	B- G156	Broad variety of information on applicaiton						
B - P 3 5 9	Free application shows dtac's commitment to Thai farmers	B- G118	CSR strategy on ICTs for Thais						
B - P 3 6 0	Free dtac application recommded to farmers	B- G157	Useful free application						
B -	Teaching farmers essential to enable them to get all benefits of services	B- G109	Training of farmers						

P 3 6 1									
B - P 3 6 2	Smartphone required		Marked as insignificant.						
B - P 3 6 3	Cheap smartphones for farmers by dtac and SMS-service as alternative	B-G158	Decreasing costs of smartphones						
B - P 3 6 4	Teaching farmers might create promising future for Thai society	B-G132	Training of farmers needed						
B - P 3 6 5	Application only one that provides agricultural information	B-G157	Useful free application						
B - P 3 6 6	Application creates knowledge exchanging resources for free for dtac customers	B-G157	Useful free application						
B - P 3 6 7	RBK was founded to develop the youth building a stronger and healthier society	B-G93	RBK initially for scholarships						

B- P368	Mr. Boonchai always keeps in mind to help people, society and the country	B-G118	CSR strategy on ICTs for Thais						
B- P369	Educate, share and communicate with everyone, also communities is important	B-G20	Knowledge sharing with other farmers						
B- P370	dtac wants to become one of the leading companies with the perfect CSR strategy	B-G118	CSR strategy on ICTs for Thais						
B-P371	Winner of ICT Excellent Awards in 2008 for SMS service	B-G118	CSR strategy on ICTs for Thais						

APPENDIX 14 - Statistical Results after Matching

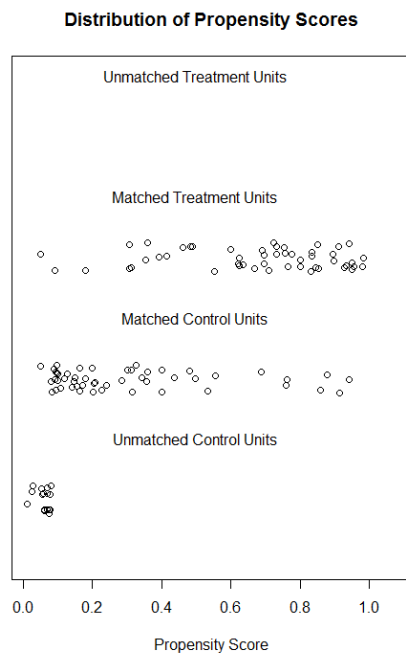


Figure 36 Propensity Score Matching after Case Elimination
Source: Own Illustration

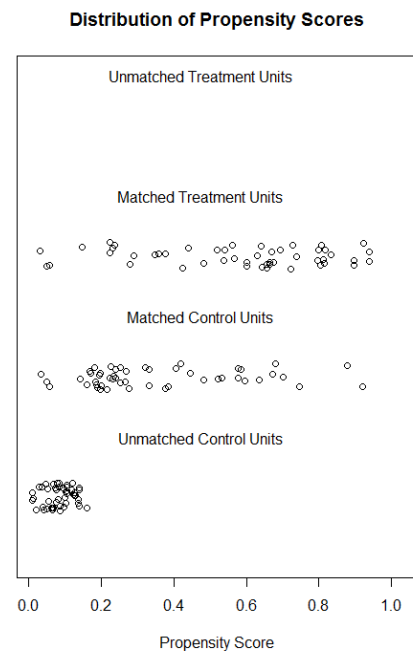


Figure 37 Propensity Score Matching after Mean Substitution
Source: Own Illustration

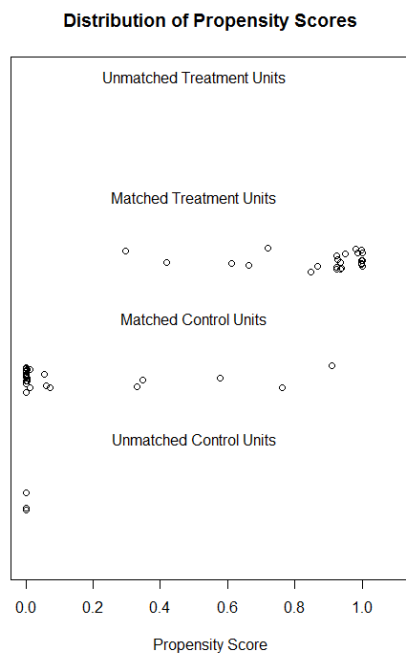


Figure 38 Propensity Score Matching for Longan Farmers after Case Elimination
Source: Own Illustration

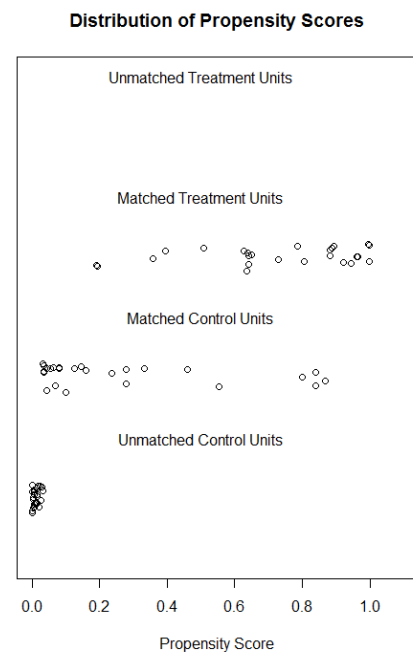


Figure 39 Propensity Score Matching for Longan Farmers after Mean Substitution
Source: Own Illustration

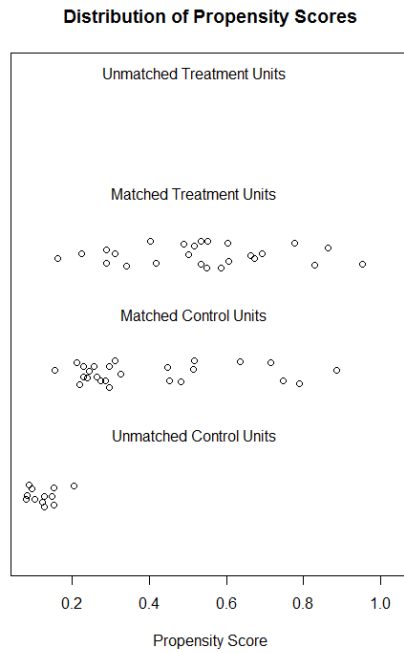


Figure 40 Propensity Score Matching for Rice Farmers after Case Elimination
Source: Own Illustration

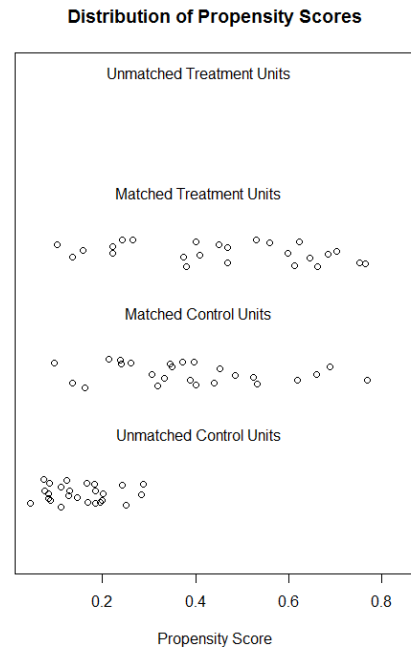


Figure 41 Propensity Score Matching for Rice Farmers after Mean Substitution
Source: Own Illustration

Table 22 Mean for Livelihood Variables after Matching (Longan Farmers)

	Farmer Info	Average monthly income from agriculture (Baht)	Average monthly income from other activities (Baht)	Average price (Baht)	Highest price (Baht)	Lowest price (Baht)
Mean^a	Yes	21240	1440	26.68	36.36	19.2
	No	6160	3000	21.76	23.48	11.68
Mean^b	Yes	21240	1440	26.68	36.36	19.2
	No	7613,32	1912	21,3	23,21	11,53

a. Propensity score matching with elimination of cases containing missing data

b. Propensity score matching with mean substitution for missing data

Source: Own Calculation

Table 23 Mann-Whitney U Test for Livelihood Variables after Matching (Longan Farmers)

	Average monthly income from agriculture (Baht)	Average monthly income from other activities (Baht)	Average price (Baht)	Highest price (Baht)	Lowest price (Baht)
Mann-Whitney U^a	8.000	363.500	150.000	11.000	87.500
Asymp. Sig. (2-tailed)^a	0.000	0.315	0.001	0.000	0.000
Mann-Whitney U^b	30.500	260.500	126.000	18.000	65.500
Asymp. Sig. (2-tailed)^b	0.000	0.298	0.000	0.000	0.000

a. Propensity score matching with elimination of cases containing missing

b. Propensity score matching with mean substitution for missing data

Source: Own Calculation

Table 24 Mean for Livelihood Variables after Matching (Rice Farmers)

	Farmer Info	Average monthly income from agriculture (Baht)	Average monthly income from other activities (Baht)	Average price (Baht)	Highest price (Baht)	Lowest price (Baht)
Mean^a	Yes	17800	2120	8.76	10.42	7.75
	No	5800	4412	11.2	13.25	8.24
Mean^b	Yes	17800	2120	8.76	10.42	7.75
	No	6200	5608	11.1	14.89	8.95

a. Propensity score matching with elimination of cases containing missing data

b. Propensity score matching with mean substitution for missing data

Source: Own Calculation

Table 25 Mann-Whitney U Test for Livelihood Variables after Matching (Rice Farmers)

	Average monthly income from agriculture (Baht)	Average monthly income from other activities (Baht)	Average price (Baht)	Highest price (Baht)	Lowest price (Baht)
Mann-Whitney U^a	32.5	354.5	519.5	469.5	384
Asymp. Sig. (2-tailed)^a	0.000	0.4141	0.001	0.002	0.165
Mann-Whitney U^b	50	377.5	533.5	515.5	433
Asymp. Sig. (2-tailed)^b	0.000	0.205	0.000	0.000	0.019

a. Propensity score matching with elimination of cases containing missing

b. Propensity score matching with mean substitution for missing data

Source: Own Calculation

Table 26 Mean for Practice Variables after Matching

	Farmer Info	Pesticide application per week	Monthly spending on pesticide	Fertilizer application per month	Monthly spending on fertiliser
Mean^a	Yes	0.58	36	0.52	460
	No	0.93	982.5	0.92	1632
Mean^b	Yes	0.58	36	0.52	460
	No	0.89	944.65	0.96	1255.01

a. Propensity score matching with elimination of cases containing missing data

b. Propensity score matching with mean substitution for missing data

Source: Own calculation

Table 27 Mann-Whitney U Test for Practice Variables after Matching

	Pesticide application per week	Monthly spending on pesticide	Fertilizer application per month	Monthly spending on fertiliser
Mann-Whitney U^a	1674	2374	1761	2219.5
Asymp. Sig. (2-tailed)^a	0.000	0.000	0.000	0.000
Mann-Whitney U^b	1604	2322	1749	2140
Asymp. Sig. (2-tailed)^b	0.005	0.000	0.000	0.000

a. Propensity score matching with elimination of cases containing missing

b. Propensity score matching with mean substitution for missing data

Source: Own calculation

Table 28 Crosstab Pesticides Used/Fertilizers Used*User after Matching

	Fertilizers used^a			Pesticides used^a			Fertilizers used^b			Pesticides used^b		
	User of Farmer Info App		Total	User of Farmer Info App		Total	User of Farmer Info App		Total	User of Farmer Info App		Total
	No	Yes		No	Yes		No	Yes		No	Yes	
Chemical	16	6	22	28	1	29	19	6	25	28	1	29
Organic	5	20	25	1	23	24	3	20	23	1	23	24
Both	29	0	29	20	2	22	28	0	28	21	2	23
Other	0	24	24	1	24	25	0	24	24	0	24	24
Total	50	50	100	50	50	100	50	50	100	50	50	100

a. Propensity score matching with elimination of cases containing missing

b. Propensity score matching with mean substitution for missing data

Source: Own Calculation

Table 29 Chi-Square Tests for Pesticides & Fertilizers Used after Matching

		Value	Asymptotic Significance (2-sided)
Pearson Chi-Square^a	Fertilizers used	71.32	0.000
	Pesticides used	85	0.000
Pearson Chi-Square^b	Fertilizers used	94.35	0.000
	Pesticides used	115.85	0.000

a. Propensity score matching with elimination of cases containing missing

b. Propensity score matching with mean substitution for missing data

Source: Own Calculation

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