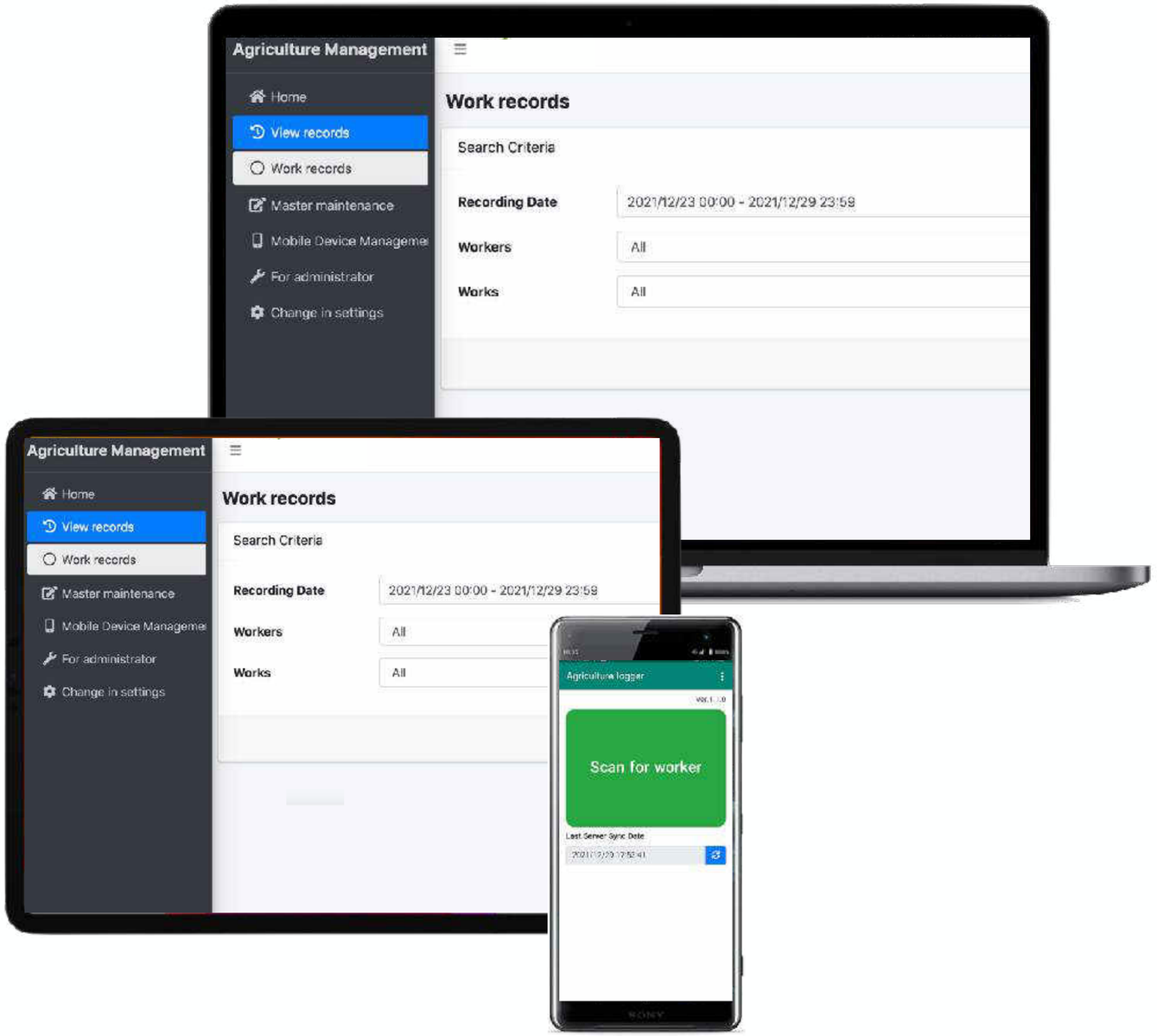
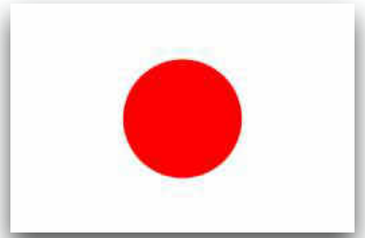


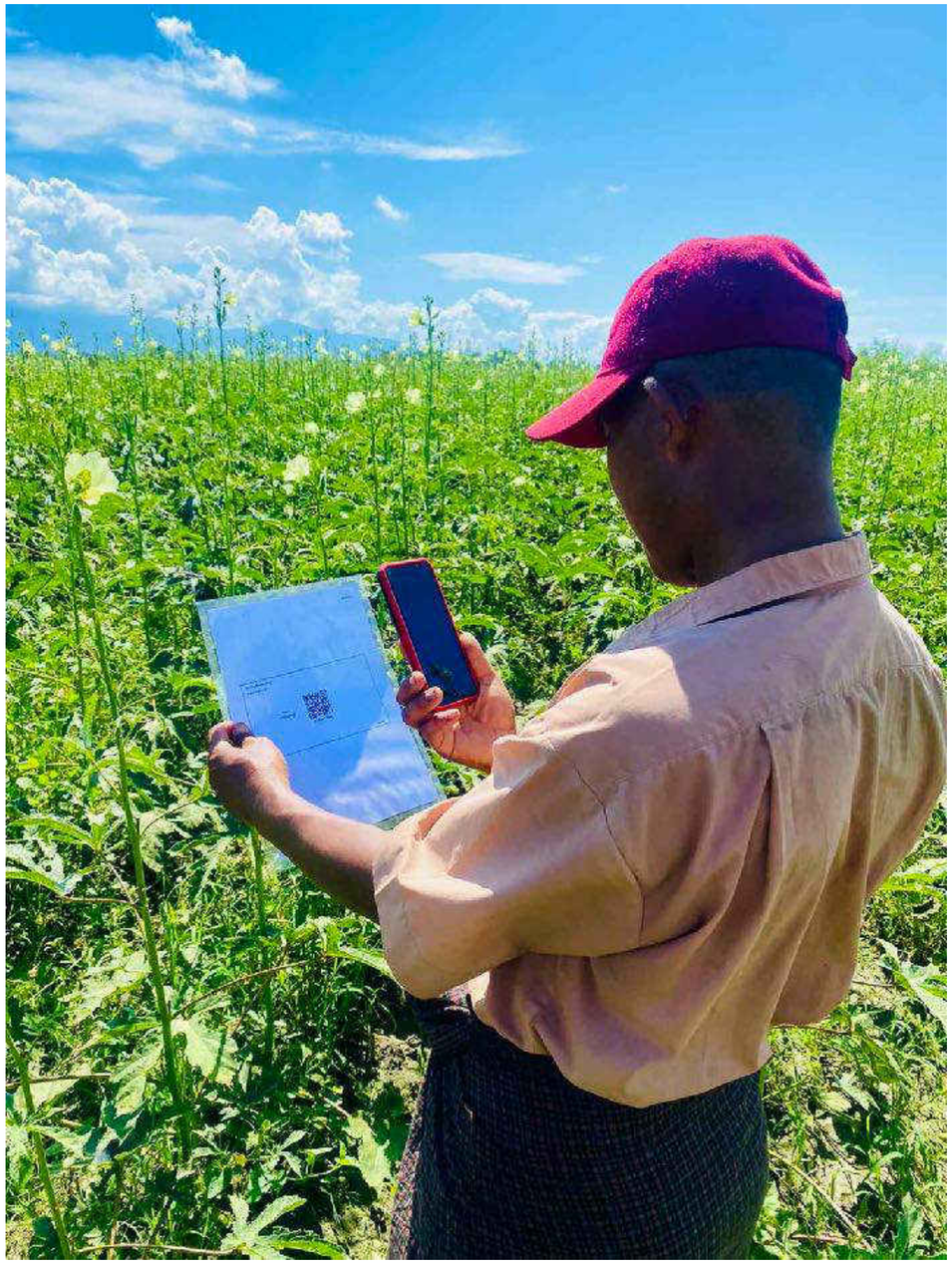


Crop production history database construction technology using QR codes and smartphone

SCALA

DAIWA COMPUTER

What is our technology?



Using farmer’s smartphone,

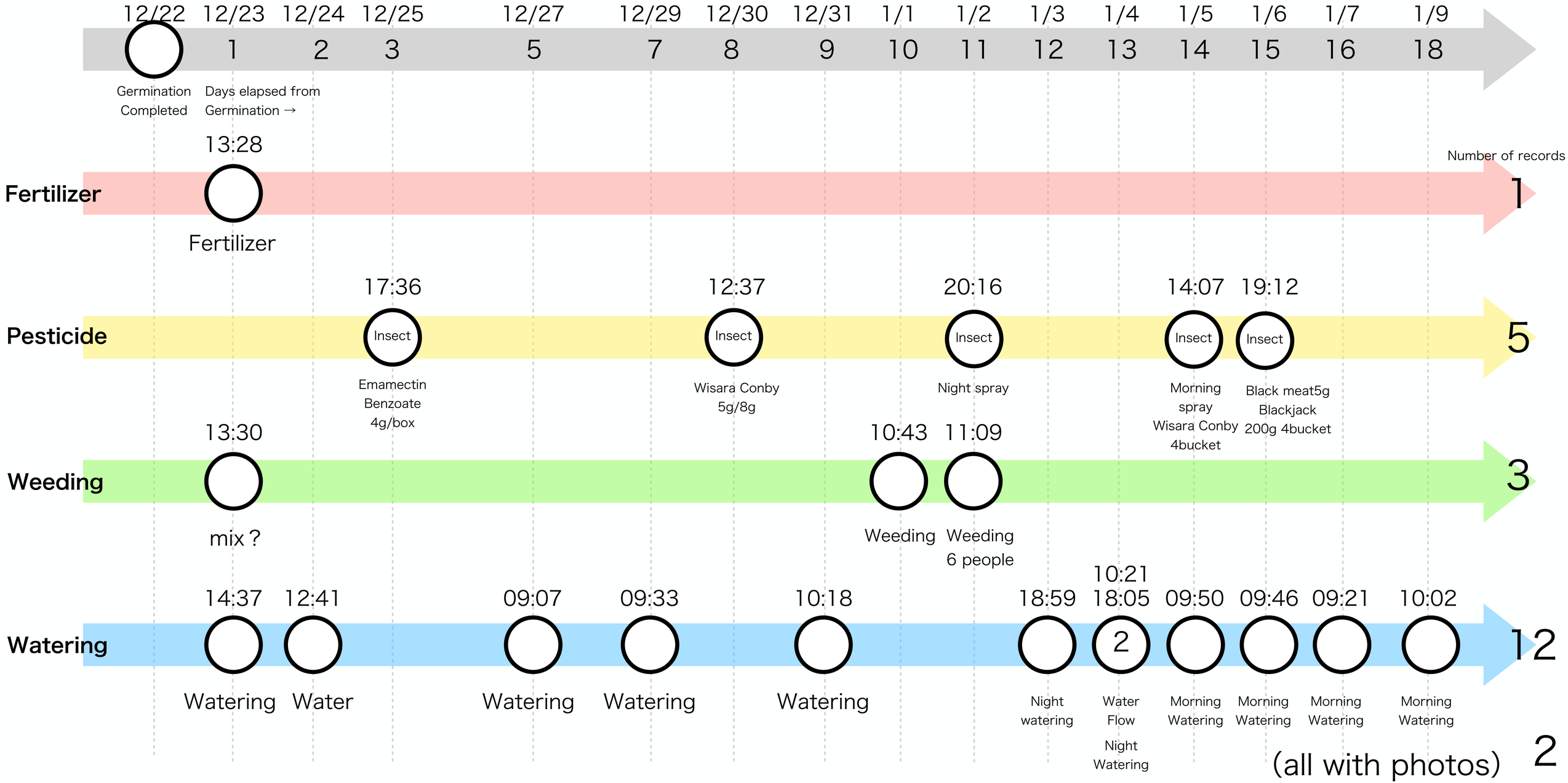
Just reading QR code,

Recording data such as

Who, When, What, Where, How much about production history

10 years of experience in Japan,
1 year overseas

Examples of recorded data（about spinach farmer)



You can also upload photos

Germination complete

Fertilizer

Watering

Pesticide

Weeding

Watering

Pesticide

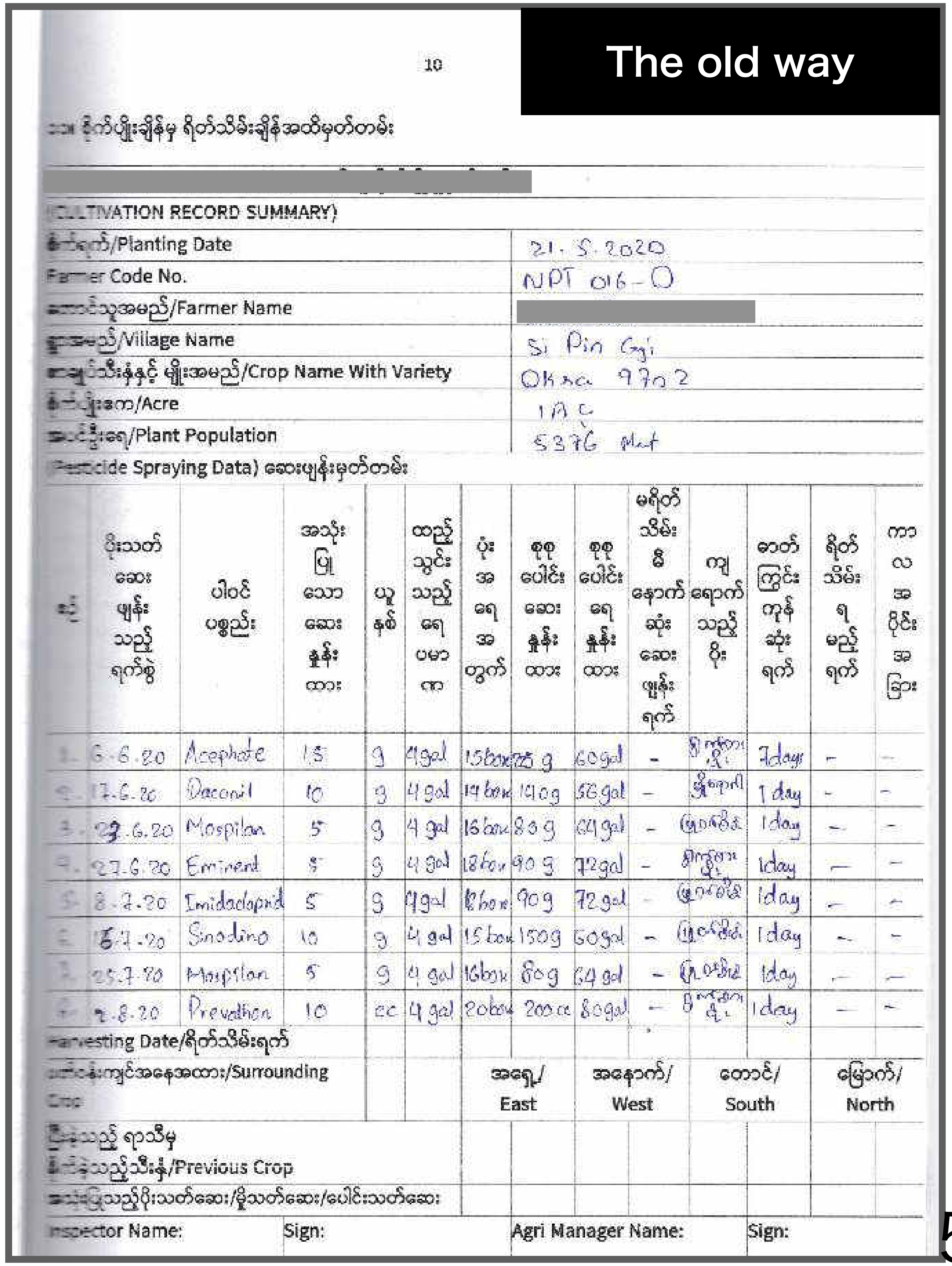
Flood damage can also be checked online

	24-Sep	25-Sep	28-Sep	29-Sep	2-Oct	11-Oct	TOTAL
၂၄.၉.၂၀၂၁ နေသာသည်	1						1
25.9.2021 မနက်		1					1
နေသာသည်			1				1
မိုးသည်းထန်စွာရွာသည်						1	1
မိုးသည်းထန်စွာရွာသည်/ထိမ်ထူထပ်သည်				1			1
မိုးသည်းထန်စွာရွာသွန်းသည်၊ ထိမ်ထူထပ်သည်					1		1
blank	1	3	1	1	1	1	8
TOTAL	2	4	2	2	2	2	14

Fertilizers and Pesticides usage is also available online

	8-Sep	13-Sep	17-Sep	14-Oct	15-Oct	30-Oct	Total
Sep							
17.9.2021 Sino Dino-10g=8 box			1				1
23.8.2021 Chlorothalonail 20g x 10Box		1					1
28.8.2021 Acephate 10g x 3Box		1					1
3.9.2021 Cartap 10g x6 Box		1					1
30.8 21 Chlorothalonail 20gx5Box	1						1
7.9.21 Cartap 50% SP 10gx 5Box	1						1
Armo15:15:15 25kg		1					1
Armo15:15:15 7 Pyi	1						1
E -OKra (MAF) Sinodino			1				1
Subtotal	3	4	2				9
Oct							
15.10.2021 Prevathon 5g 8 box					1		1
21.9.2021 Imidadupride 5g 8 box				1			1
26.9.2021 အမဲနက် 5g 8box				1			1
29.10.2021 Sino Dino 5g 8 box						1	1
Subtotal				2	1	1	4
Total	6	8	4	4	2	2	26

The old way



10

(CULTIVATION RECORD SUMMARY)

[redacted]

စိုက်ရက်/Planting Date	21. 5. 2020
Farmer Code No.	NPT 016-O
တောင်သူအမည်/Farmer Name	[redacted]
ရွာအမည်/Village Name	Si Pin Gyi
စိုက်ပျိုးသီးနှံနှင့် မျိုးအမည်/Crop Name With Variety	Okra 7702
စိုက်ပျိုးဧက/Acre	1AC
အပင်ဦးရေ/Plant Population	5376 Plant

(Pesticide Spraying Data) ဆေးဖျန်းမှတ်တမ်း

1	6.6.20	Acephate	15	9	4gal	15box	75g	60gal	-	[illegible]	7day	-	-
2	17.6.20	Daconil	10	9	4gal	14box	140g	56gal	-	[illegible]	1day	-	-
3	23.6.20	Mospilan	5	9	4gal	16box	80g	64gal	-	[illegible]	1day	-	-
4	27.6.20	Eminent	5	9	4gal	18box	90g	72gal	-	[illegible]	1day	-	-
5	8.7.20	Imidacloprid	5	9	4gal	18box	90g	72gal	-	[illegible]	1day	-	-
6	15.7.20	Sinodino	10	9	4gal	15box	150g	60gal	-	[illegible]	1day	-	-
7	25.7.20	Mospilan	5	9	4gal	16box	80g	64gal	-	[illegible]	1day	-	-
8	2.8.20	Prevathon	10	20	4gal	20box	200cc	80gal	-	[illegible]	1day	-	-

Harvesting Date/ရိတ်သိမ်းရက်

Surrounding Crop — East / West / South / North

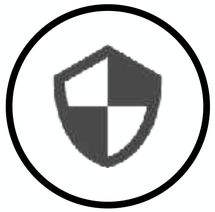
Previous Crop

Inspector Name: Sign: Agri Manager Name: Sign:

Effect and benefit of our technology

Form collective knowledge among farmers leading to increased productivity

By recording, consolidating, accumulating, and analyzing farming processes, it will be possible to compare the results with other farmers and to compare them over time. This will lead to optimal methods of farming processes that lead to higher yields, and will be shared with farmers to promote awareness and learning.



Contributing to farm risk management

Since farmers can record photos of their fields, they can share information with managers in real time about pests, floods, and other conditions that may damage crops. This allows farmers can receive expert advice on how to minimize damage and alert other farmers.

Establish traceability

Information on the types of seeds, agricultural chemicals, and fertilizers used, as well as the amount and frequency of use, can be recorded, making it possible to visualize the production process, which is essential for food safety. This is especially important for overseas exports and direct sales to consumers.

Creation of trust

It reveals farmers who are working hard. It can also be used by banks to monitor new lending and credit management based on productivity improvements and yield forecasts, and by insurance companies to calculate expected losses and simplify loss assessment.

About PoC in Thailand

Target crop


ex)Durian

- more preferable

・Cash crops,

・Such as those that Thai government is promoting for export,

・Those with a relatively short production period,

Potential Partners


ex) processing company

- more preferable

・have contract with at least 50 farmers,

・knowing the farmers' harvest of previous years,

・interested in predicting yields,

Procedure (We can start anytime)

STEP1
Gathering

・MTG to discuss the data to be recorded

・We will provide the app to farmers through your company and start gathering data

STEP2
Analyzing

・We will analyze the production history data recorded by farmers and their yields. Particular attention will be paid to comparisons with other farmers who produced at the same time,

STEP3
Utilizing

・Based on the production process of the person who had the highest yield in that period, we aim to create learning opportunities for other farmers and improve their productivity,

Business model

App user

Farmer

For free

Admin user

(Ex. Processing Company)

Initial Fee
Monthly Fee

Provider

We

We would like to complete the system for widespread use in Thailand with our initial demonstration（PoC）partners and sell it as a joint product.

Contact Info

SCALA https://scalagrp.jp/en/

Scala, Inc.

Ryo Ishihara (Mr.) ishihara@scalagrp.jp

Director
Global Business Department
Business Development Division

English OK, please feel free to contact me

Co-proposer

https://www.daiwa-computer.co.jp/en/

Daiwa Computer Co., Ltd.

Takashi Tashiro(Mr.)

General Manager
i-agriculture Development Division

Our efforts in production

1) We acquired agricultural production facilities in Fukuroi City, Shizuoka. (Built a 2,148 m² greenhouse on 8,800 m² of farmland; 2,557 m² of which are consigned to Kondo Farm)
2) Melons and tomatoes are grown by hydroponic culture, which uses no soil.
3) We are working on improving the tomato harvest using our proprietary Total Environment Control, which controls the supply of nutrient mix according to the state of growth.