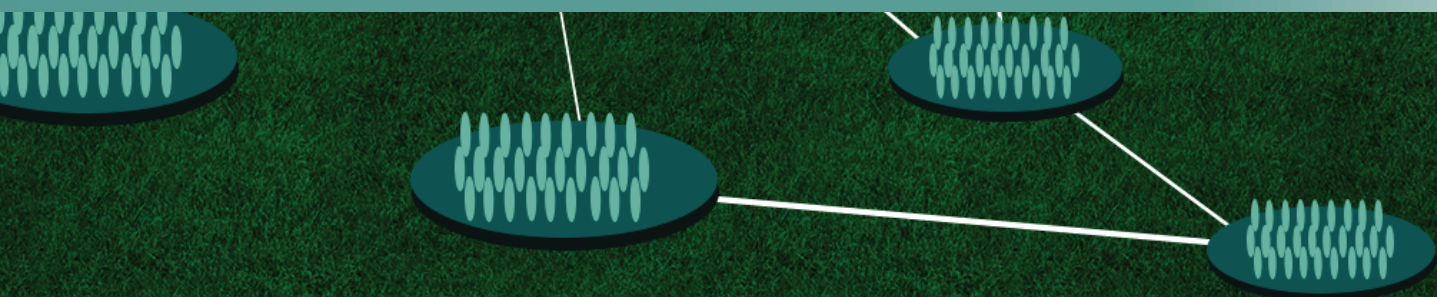


User's Manual



TPSO
Trade Policy and Strategy Office



Trade Policy and Strategy Office (TPSO)

By Thammasat University Research and Consultancy Center (TURAC)

User's Manual: TraceThai.com

Developing Blockchain Application to Enhance Trade and Economy Project

Trade Policy and Strategy Office (TPSO)

By	Thammasat University Research and Consultancy Center (TURAC)
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Download the document at bit.ly/3kWjILp
or scan QR Code.



Index

1.	Introduction.....	1
2.	General User (Agriculturist/ Operator)	3
	2.1. How to Log In.....	3
	2.2. User Profile	5
	2.3. How to record 'Member'	7
	2.4. How to input 'Field'	9
	2.5. How to input 'Certificate'	12
	2.6. How to input 'Raw Material'	15
	2.7. How to input 'Production'	19
	2.8. How to input 'Distribution'	22
	2.9. How to Reject Output	24
	2.10.How to access QR Code.....	25
	2.11.How to create new profile.....	26
	2.12.Report	29
3.	How to Endorse the Certificate	30
4.	Traceability for the Consumer	32

User's Manual: TraceThai.com

Blockchain Organic Agricultural Product Traceability System

1. Introduction

TraceThai traceability system can be directly accessed via Web Browser such as Chrome, Internet Explorer, Safari, Firefox etc. without any pre-installed program. The system can automatically adjust the display to be fit on both computer screen and mobile screen. Key information such as producer, certifications, production, and distribution are stored in public blockchain. This technology enhances security and reliability of the system data.

TraceThai is beneficial to two groups of users:

(1) Consumers

- Trace the origin of agricultural products
- Confide that the food has been certified from the reliable Certification Body (CB)

(2) Agriculturists/ Operators

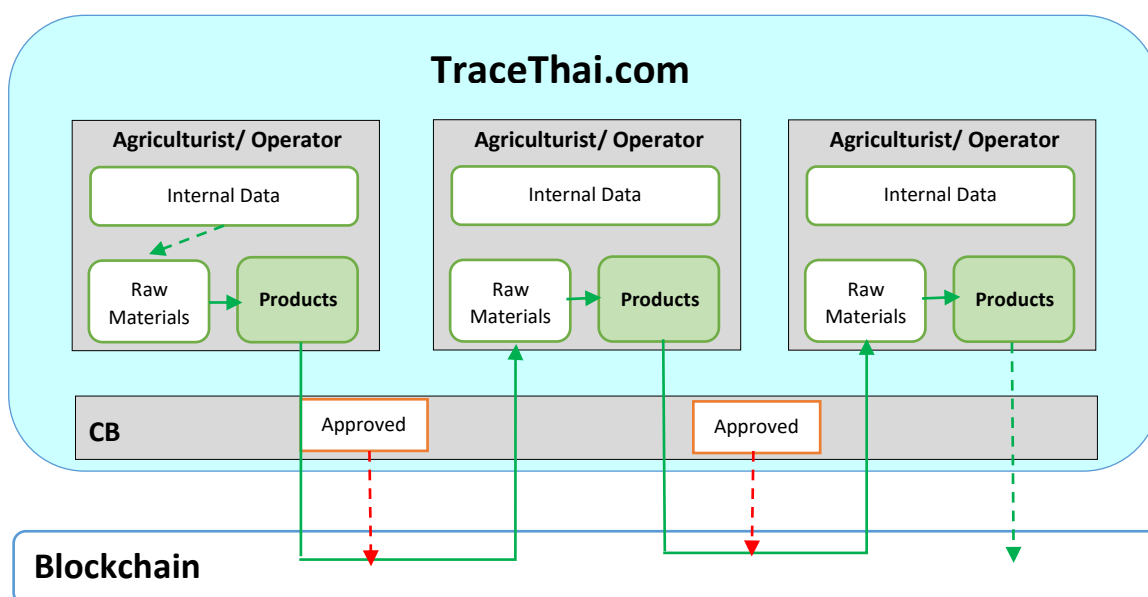
- Record, control and monitor the inventory
- E-Document of certification for trading partners
- Create value added to their products

The consumer can trace the origin of the products by scanning the QR Code label or enter Lot Number into TraceThai.com website. The display will show the path on map where the product came from.

TraceThai shows details of the product path including the operator's address, the shipment date. More details can be searched to reach the certificates related to the product. The agriculturist can arbitrarily show the copy of the certificates.

The design concept of TraceThai is very flexible that enables the system to be the platform of any agricultural products. There are three steps based on input-output design. Each user account can enter the data into three steps, input, output, and distribution. A single user account can be separated into various profiles to suit with their activities during the process.

The Design Concept of Input-Output Sequence



The data stored on Blockchain will be kept at minimum to save cost. Only the data necessary to trace the origin of product will be kept on blockchain whereas the rest are kept on local server. The data on blockchain are producer identity, production date, certificate, etc. The internal data for each account that are not related to the distribution are stored on the local server.

Summary of TraceThai Operation

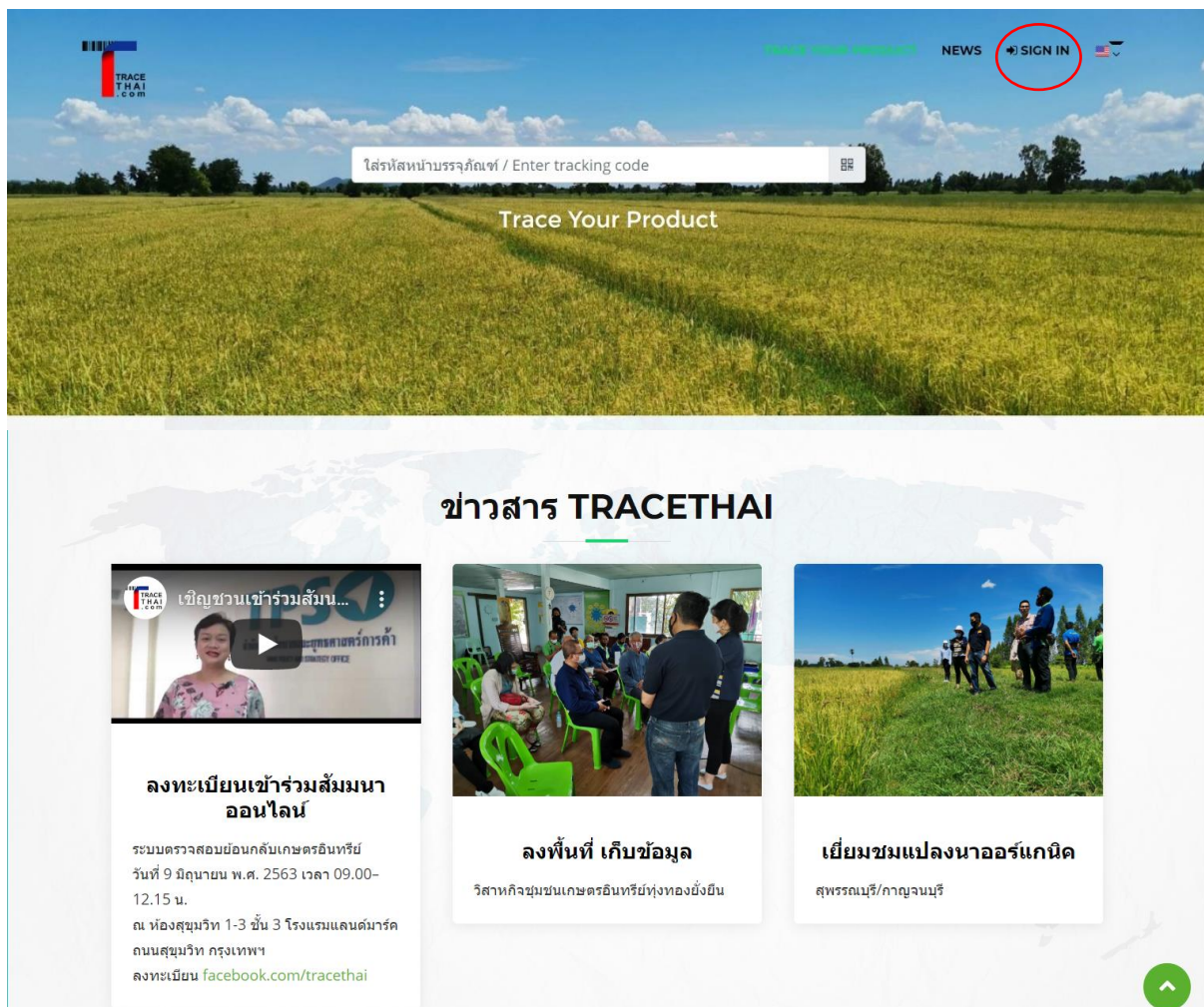
1. The data entry units are independent to one another. The unit's roles can be more than one. Using different profile in one account, the user can enter data on group members, community enterprise, operator, exporter, or importer. The user will be responsible with the activities they are involved.
2. The data entry begins from the input activity, followed by production, and distribution. In case that the input has been forwarded by the producers within the system, the data will be automatically available to the subsequent unit.
3. Enter data related to organic certificate into the system, preferably with the picture of the certificate.
4. Data privacy has been strictly imposed. Only the necessary data for traceability will be shown to the public while trade secret such as Transaction Certificate (TC) or Transaction Document (TD) will be shown only to the designated trading partners.

2. General User (Agriculturist/ Operator)


This user group might be agriculturalist, community enterprise, trader, exporter, or importer. They are referred as 'Operator' in this manual. Their functions are mainly similar but differ only on the raw material and the final output.

2.1. How to Log In

- (1) Go to URL: TraceThai.com and click on "Sign In" on the upper right of the screen.



(2) Enter E-mail and password.



Sign In

E-Mail Address

Password

[Login](#)

[Forgot your password?](#)
[Didn't receive confirmation instructions?](#)
[Didn't receive unlock instructions?](#)

Don't have an account? [Contact Us](#)

(3) For the first time user, the system shows 'Basic Information' tab. The user enters the description of the unit or create the user profile. After user's information has been recorded, they can enter more data on other tabs.

1. Basic Information
2. Production & Distribution
3. Reports

1) Profile

2) Members

3) Fields

4) Certificates

Profile Latest Update: 2020-10-04 22:57:33 +0700

Company Name/Entrepreneur Name *

Picture(1)

[Choose File](#) No file chosen

Picture(2)

[Choose File](#) No file chosen

Storytelling

File Edit View Insert Format Tools Table

↶ ↷ Paragraph ⌵
B I
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P

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Country

ไทย Thailand ⌵

Province

กรุงเทพมหานคร Bangkok ⌵

Address *

ต้องระบุ required

Tel

Fax

LINE ID

Facebook

Email *

test6@gmail.com

Website

2.2. User Profile

The user can enter data as a single entrepreneur or the community enterprise. Key data are telephone number, location, picture. All the information in this section will appear when the consumer scan QR code of the traceability system.

How to input Profile.

- (1) Click on “1. Basic Information”.
- (2) Click on “(1) Profile”.
- (3) Input the description of the operator.
 - Company Name/ Entrepreneur Name
 - Picture (Click ‘Choose File’ to upload file from the computer. The user can upload only 2 pictures)
 - Storytelling. The user can add more details about the company or products. This information will be shown on the result page when customers trace back with the traceability system.
 - Country
 - Province
 - Mailing Address
 - Telephone Number
 - Fax Number
 - Line ID
 - Facebook
 - E-Mail (The default is the e-mail used to define the user account. This can be changed to be any e-mail that the user would like to show to the consumer.)
 - Website URL
 - Latitude, Longitude (The data can be entered by three methods. First, select from the map. Second, direct entry. Third, use the location detected by the GPS of the smart phone.
 - Select the icon to be shown on the map.
- (4) Finish the process by ‘Save’.

1. Basic Information 2. Production & Distribution 3. Reports

1) Profile

2) Members

3) Fields

4) Certificates

Profile

Latest Update: 2020-10-04 22:57:33 +0700

Company Name/Entrepreneur Name *

One Organic Farm

Picture(1)

Choose File No file chosen



Picture(2)

Choose File No file chosen

Storytelling

File Edit View Insert Format Tools Table

↶ ↷ Paragraph B I [Text Alignment Icons] [List Icons] [Link Icon] [Image Icon] [Video Icon] [Table Icon]

One Organic Farm was formed by a group of 100 farmers in Yasothon province. We produce premium organic rice with IFOAM, USDA and EU organic standards.

P

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Country

ไทย Thailand

Province

ยโสธร Yasothon

Address *

123 Kudnamsai Sub-District, Khorwang District

Tel

045-123456

Fax

LINE ID

Facebook

www.facebook.com/Kasetyaso

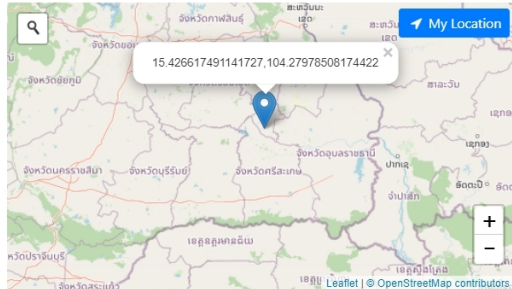
Email *

oneorganicyaso@gmail.com

Website

www.oneorganicyaso.com

Location *



Latitude,Longitude *

15.426617491141727,104.27978508174422

Icon

- ☐ ref
- ☐ farmer
- ☒ farmer_group
- ☐ mill
- ☐ packaging
- ☐ operator

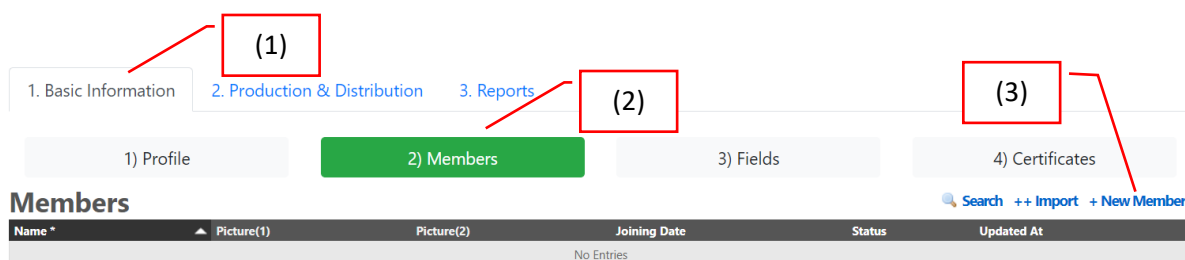
Save

2.3. How to record 'Member'

In case that the user is the representative of the community enterprise that have many members. The user needs to input the data of all members into TraceThai platform to tally the outputs from all members and allows the system to track the lot number production to the original source of production.

How to record 'Member'

- (1) Click on Tab '1. Basic Information'
- (2) Click on '2) Members'
- (3) Click on '+ New Member'



(4) Enter Member details

- Name
- Description/ Remark
- Storytelling. The user can add more details about the member. This information will be shown on the result page when customers scan QR code with the traceability system.
- Picture (Click 'Choose File' to upload file from the computer. The user can upload only 2 pictures)
- Joining Date
- Status (Select from the drop down; Normal/Suspend/Revoke)

(5) Click 'Save'

1. Basic Information 2. Production & Distribution 3. Reports

1) Profile

2) Members

3) Fields

4) Certificates

Add New Member

Member's Name

required

Description

Storytelling

File Edit View Insert Format Tools Table

↶ ↷ Paragraph B I [Text Alignment Icons] [List Icons] [Link Icon] [Image Icon] [Video Icon] [Table Icon]

P

POWERED BY TINY

Picture(1)

Choose File No file chosen

Picture(2)

Choose File No file chosen

Joining Date

dd-----yyyy



(5)

Status

Normal

Save

Cancel

- (6) The system shows the table of member list. If the user wants to add more member, click '+New Member' again and repeat (4)-(5).
- (7) The user can update member data any time by clicking 'Edit' on the member's row.
- (8) Click 'Delete' if the user wants to remove the member out of the group.

1. Basic Information 2. Production & Distribution 3. Reports

1) Profile

2) Members

3) Fields

4) Certificates

Members

Search ++ Import + New Member

Name *	Picture(1)	Picture(2)	Joining Date	Status	Updated At	
Mr.Boonma Jangsuk	farmer.jpg		01-Jan-2017	Normal	Sat, 3 Oct 2020 11:55:39 +0700	Detail Edit Delete
Mr.Roongroj Kladee			09-Jan-2019	Normal	Sat, 3 Oct 2020 12:00:58 +0700	Detail Edit Delete

(9) Click 'Detail' on any specific member will show detail of that member.

1. Basic Information 2. Production & Distribution 3. Reports

1) Profile **2) Members** 3) Fields 4) Certificates

Members

Search ++ Import + New Member

Name *	Picture(1)	Picture(2)	Joining Date	Status	Updated At
Mr.Boonma Jangsuk Name * Mr.Boonma Jangsuk Description Uncle Boonma, who has over 30 years of experience growing organic rice. Story Telling farmer.jpg Picture(1) Picture(2) Joining Date 01-Jan-2017 Status Normal Updated At Sat, 3 Oct 2020 11:55:39 +0700 Close					
Mr.Roongroj Kiadee			09-Jan-2019	Normal	Sat, 3 Oct 2020 12:00:58 +0700

Detail Edit Delete

2.4. How to input 'Field'

'Field' data will be linked to the member in 2.3 in which one member can own more than one field. It is obligation to link the farm to its owner whose membership has already been recorded.

How to input 'Field'

- (1) Click on '1. Basic Information'
- (2) Click on '3) Fields'
- (3) Click on '+ New Field'

1. Basic Information 2. Production & Distribution 3. Reports

1) Profile 2) Members **3) Fields** 4) Certificates

Fields

Search ++ Import + New Field

Owner	Field Name *	Area	Plant	Picture(1)	Picture(2)
No Entries					

(4) Input details of the field

- Owner
- Field Name
- Description/ Note
- Storytelling. This information will be shown on the result page when customers scan QR code with the traceability system.
- Area
- Plant
- Picture (Click 'Choose File' to upload file from the computer. The user can upload only 2 pictures)
- Location (Latitude, Longitude)

- Organic Standard (If not select, the system will use standard data that enter in Certificate Menu)

(5) Click 'Save'

1. Basic Information
2. Production & Distribution
3. Reports

1) Profile
2) Members
3) Fields
4) Certificates

Add New Field

Owner
 --Please Select--

Field Name * e.g. Smith01
 required

Description

Storytelling

File Edit View Insert Format Tools Table

← → Paragraph B I [Text Alignment Icons] [List Icons] [Link Icon] [Image Icon] [Table Icon]

Area Rai Ngan Wah

Plant
 Banana

Picture(1)
 Choose File No file chosen

Picture(2)
 Choose File No file chosen

Location *

Latitude, Longitude *
 required

Standard (Retrieve from the master certificate if not specified)

☐ IFOAM
☐ EU
☐ NOP(USDA)
☐ COR
☐ JAS
☐ Organic Thailand

Save Cancel

- (6) The system shows the farm list. The user can add more farm by clicking on '+ New field' and repeat step (4)-(5).
- (7) The user can update by 'Edit' on the specific field.
- (8) The field can be removed by 'Delete'.

1. Basic Information 2. Production & Distribution 3. Reports

1) Profile

2) Members

3) Fields

4) Certificates

Fields

[Search](#) ++ [Import](#) + [New Field](#)

Owner	Field Name *	Area	Plant	Picture(1)	Picture(2)	
Mr.Boonma Jangsuk	Boonma01	3-0-100	Mali Nil Surin Organic Rice	157603_2.jpg		Detail Edit Delete
Mr.Boonma Jangsuk	Boonma02	2-2-0	RD15 Organic Rice			Detail Edit Delete
Mr.Roongroj Kladee	Roong01	1-0-0	RD15 Organic Rice	157607_3.jpg		Detail Edit Delete

(9) Click 'Detail' on any specific field will show detail of the field.

1. Basic Information 2. Production & Distribution 3. Reports

1) Profile

2) Members

3) Fields

4) Certificates

Fields

[Search](#) ++ [Import](#) + [New Field](#)

Owner	Field Name *	Area	Plant	Picture(1)	Picture(2)
Boonma01					
Owner	Mr.Boonma Jangsuk				
Field Name *	Boonma01				
Description Story Telling	Mali Nil Surin Organic Rice Field. Start planting on August 10, 2020.				
Area	3-0-100				
Plant	Mali Nil Surin Organic Rice				
IFOAM	<input type="checkbox"/>				
EU	<input type="checkbox"/>				
NOP(USDA)	<input type="checkbox"/>				
COR	<input type="checkbox"/>				
JAS	<input type="checkbox"/>				
Organic Thailand	<input type="checkbox"/>				
Lat,Lng	15.501325828252595,104.29046630859376				
Picture(1)	157603_2.jpg				
Picture(2)					
Active status	<input checked="" type="checkbox"/>				
Updated at	Sat, 3 Oct 2020 12:18:41 +0700				
Close					

2.5. How to input 'Certificate'

The Certification Menu allows user to input 'Master Certificate' of the operator. This certificate certifies all plants grown by all members. The certificate ensures the consumer that all organic process is complied to the standard. Once the certificate data is input into the system, there will be three level of verification.

Level 1 Self verified by the user

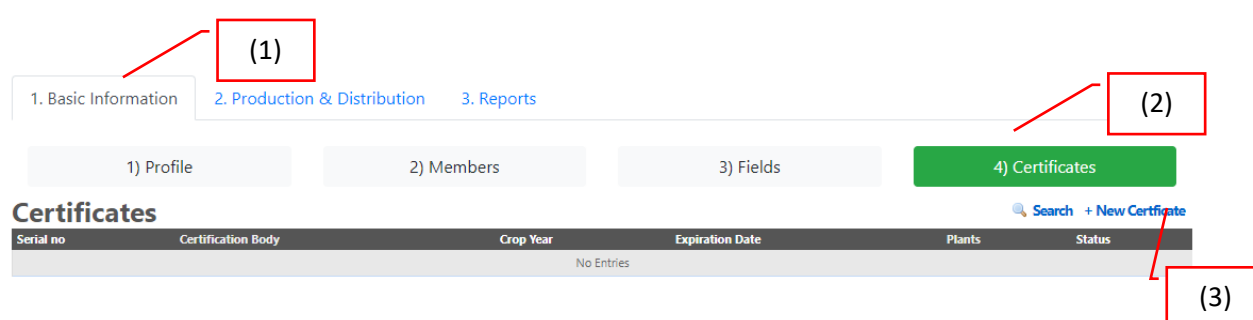
Level 2 TraceThai admin verifies based on the public data shown by the certification body (CB).

Level 3 CB who issues the certificate endorses the certificate through e-mail sent by the system.

The master certificate lasts for one year. Therefore, the user needs to re-enter this data once a year. TraceThai platform will notify the user by e-mail 3 months before the current certificate expires. The user needs to contact CB to certify the coming crop before the current certificate expires.

How to input 'Certificate'

- (1) Click on '1. Basic Information'
- (2) Click on '4) Certificates'
- (3) Click on '+ New Certificate'



- (4) Input details of the certificate
 - Serial Number of Certificate
 - Certification Body (CB)
 - Crop Year
 - Upload certificate file (.jpg, .png, or .pdf)
 - Issuance Date/ Expiration Date
 - Plants certified by CB
 - Estimated Output
 - Standards i.e. IFOAM, EU/USDA/COR/JAS or Organic Thailand
- (5) Click 'Save'

1. Basic Information 2. Production & Distribution 3. Reports

1) Profile

2) Members

3) Fields

4) Certificates

Add New Certificate

Serial No. *

required

Crop Year

Issuance Date *

dd-----yyyy

Plants *

Plant	Expected Weight (kg)
<input type="checkbox"/> Banana	
<input type="checkbox"/> RD15 Organic Rice	
<input type="checkbox"/> RD43 Organic Rice	
<input type="checkbox"/> Jasmine Organic Rice	
<input type="checkbox"/> Chai Nat 1	
<input type="checkbox"/> RD69 (Tubtim Chumphae) Organic Rice	
<input type="checkbox"/> PinKaset Organic Rice	
<input type="checkbox"/> Black Mali Nong Khai Organic Rice	
<input type="checkbox"/> Mali Nil Surin Organic Rice	
<input type="checkbox"/> Thai Pathumthani Fragrant Rice	
<input type="checkbox"/> Hom Pathum Thep Organic Rice	
<input type="checkbox"/> Red Hommali Organic Rice	
<input type="checkbox"/> Khao' Jow Hawm Suphan Buri	
<input type="checkbox"/> RD6 Glutinous Rice	
<input type="checkbox"/> Riceberry Organic Rice	
<input type="checkbox"/> Organic Black Bean	
<input type="checkbox"/> Organic Tiger Peanut	
<input type="checkbox"/> Organic Mung Bean	
<input type="checkbox"/> Organic Soy Bean	
<input type="checkbox"/> Mixed	
<input type="checkbox"/> Spinach	
<input type="checkbox"/> Pumpkin	

Certification Body *

Organic Agriculture Certification Thailand (ACT)

Certificate File(Image or Pdf)

Choose File

No file chosen

Expiration Date *

dd-----yyyy

Standards *

- ☐ IFOAM
- ☐ EU
- ☐ NOP(USDA)
- ☐ COR
- ☐ JAS
- ☐ Organic Thailand

Save

Cancel

- (6) The system shows the certification list. The user can add more certificate by clicking on '+ New Certificate' and repeat step (4)-(5).
- (7) The user can 'Edit' the information in case errors happen as long as there is no verification by CB or TraceThai administrator. The certificate can be removed by clicking 'Delete'. Please note that once the certificate has been referred in any production or distribution, the user is not allowed to edit any data of the certificate. This is to guarantee the integrity of the system.

1. Basic Information
2. Production & Distribution
3. Reports

1) Profile
2) Members
3) Fields
4) Certificates

Certificates

Search + New Certificate

Serial no	Certification Body	Crop Year	Expiration Date	Plants	Status	
C040/63	สำนักงานมาตรฐานเกษตรอินทรีย์ (มกท) Organic Agriculture Certification Thailand (ACT)	2020	28-Feb-2021	RD15 Organic Rice, RD43 Organic Rice, Black Mali Nong Khai Organic Rice, ... (6)	Pending	Detail Edit Delete

- (8) Click 'Detail' on any specific certificate will show detail of the certificate.

1. Basic Information
2. Production & Distribution
3. Reports

1) Profile
2) Members
3) Fields
4) Certificates

Certificates

Search + New Certificate

#<Certificate:0x00007fe19b6bd238>

Serial no
C040/63

Certification Body
สำนักงานมาตรฐานเกษตรอินทรีย์ (มกท) Organic Agriculture Certification Thailand (ACT)

Crop Year
2020

Issuance Date
01-Mar-2020

Expiration Date
28-Feb-2021

Plants

Plant	Expected Weight (kg)	Recorded Weight (kg)
RD15 Organic Rice		0.0
RD43 Organic Rice		0.0
Black Mali Nong Khai Organic Rice		0.0
Mali Nil Surin Organic Rice		0.0
Red Hommali Organic Rice		0.0
Riceberry Organic Rice		0.0

IFOAM☒
EU☒
NOP(USDA)☒
COR☒
JAS☐
Organic Thailand☐
Certificate

Active status☒
Status
Pending

Updated at
Sat, 3 Oct 2020 12:28:41 +0700

Close

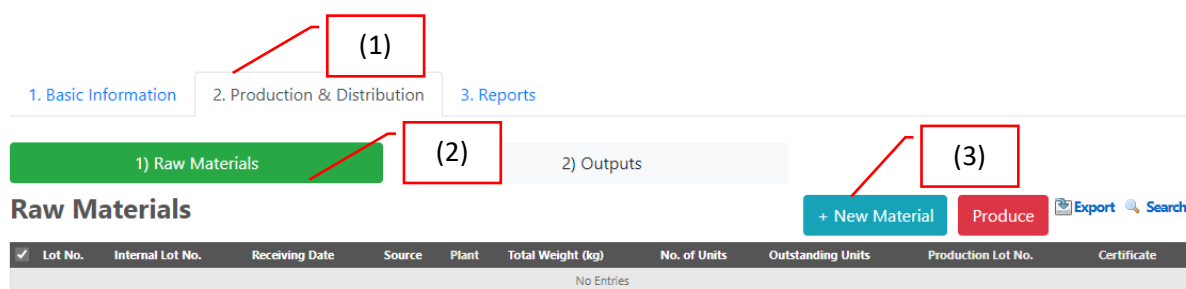
2.6. How to input 'Raw Material'

Raw material in TraceThai platform can be anything depending on the production process. For example, the community enterprise who compiles materials or products from members. The raw material in this case might mean the paddy rice. If the user is packager, the raw material might be the rice to be packed for distribution.

There are two types of the raw material. First, the raw material from the internal process. Second, the raw material obtained from different user's account.

For the first type, the data entry process will be as follows:

- (1) Click on tab '2. Production and Distribution'
- (2) Click on '1) Raw Materials'
- (3) Click '+ New Material'



(4) Input raw material details

- Internal Lot Number
- Field that produces raw material
- Plant type (Default data was automatically extracted from the certificate that ties with this field, the user just selects the plant from the list. However, the user might select other plants out of the list in case that the plant declared earlier has been damaged and the producer switch to grow other plant without prior notice.)
- Receiving Date
- Expiration Date
- Format of the material such as paddy rice, rice, coarse rice, husked rice, rice bran.
- Packaging such as big bag, box, bag, casket
- Size (in Kilogram) per Package
- Number of Packages
- Total Weight (in Kilogram)

Please note that the last three input are related since

Total Weight = Number of Packages X Size per Packages.

Therefore, the user can input any two fields, and the rest shall be auto filled by the system.

1. Basic Information
2. Production & Distribution
3. Reports

1) Raw Materials
2) Outputs

New Material

Internal Lot No.
optional

Field *
Boonma02

Plant
RD15 Organic Rice

Receiving Date *
03-Oct-2020

Expiration Date
dd----yyyy

Format of Material *
Paddy

Packaging
sack

Package Size (kg) *
25

No. of Unit *
8

Total Weight (kg) *
200.000

Description

Certificate *
C040/63 [Organic Agriculture Certification Thailand (ACT)] [01-Mar-2020 to 28-Feb-2021] [RD15 Organic Rice,RD43 Organic Rice,Black Mali Nong Kha]

Save Cancel

(5) Click 'Save'

(6) Once the input is complete, the system presents the list of raw material as follows:

- Lot Number is auto generated to be used for traceability
- Internal Lot Number for internal reference
- Receiving Date
- Source (There are two types; 'Self-Produced' means the data is entered by the user, 'Obtained' means the raw material has been distributed to the user from other users in TraceThai platform.
- Plant Type
- Total Weight (in Kgs.)
- Number of Units
- Outstanding Units (If the raw material has already been used up, the number will be zero).
- Production Lot Number (refer to the production lot number that has used this raw material).
- Certificate (The user can click 'View' to see the master certificate.

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials
2) Outputs

+ New Material Produce Export Search

Raw Materials

Lot No.	Internal Lot No.	Receiving Date	Source	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Production Lot No.	Certificate
000144F33001	-	01-Oct-2020	Self-Produced	RD15 Organic Rice	200,000	8,000	8,000	-	View Detail Delete Reject

- (7) The user can click '+ New Material' to add more input and repeat process (4) to (5). The system will support the user by building the template to reduce time to input the data and make it convenient for the user to re-enter data.

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials 2) Outputs

New Material

Template: -Select form existings-
 -Select form existings-
 Boonma02

Internal Lot No. Optional

Field * Boonma01

Plant * Mali Nil Surin Organic Rice

Receiving Date * 03-Oct-2020

Expiration Date dd----yyyy

Format of Material * Paddy

Packaging เช่น ถุง กระสอบ กล่อง

- (8) The pop-up window will appear for the user to confirm.
- (9) The system will extract stored data filtered by user-chosen template. The user just only edits the data that changes from previous record such as receiving date, expiration date, total unit, etc.
- (10) The system will not allow the user to edit the record that is already stored on blockchain. If there is any error during data entry, the user needs to delete the whole record and begin from '+New Material.'
- (11) The user can click 'Detail' to see all the data.

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials 2) Outputs

+ New Material Produce Export Search

Raw Materials

Lot No.	Internal Lot No.	Receiving Date	Source	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Production Lot No.	Certificate
000144F33001	-	01-Oct-2020	Self-Produced	RD15 Organic Rice	200,000	8,000	8,000	-	View Detail Delete Reject

Raw Materials

[+ New Material](#)
[Produce](#)
[Export](#)
[Search](#)

Lot No.	Internal Lot No.	Receiving Date	Source	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Production Lot No.	Certificate
000144F33001									
Name/Brand	-								
Description									
Lot No.	000144F33001								
Internal Lot No.	-								
Receiving Date	01-Oct-2020								
Expiration Date	-								
Source	Self-Produced								
Field	Boonma02								
Seller	-								
Transaction Certificate	-								
Qr	-								
Plant	RD15 Organic Rice								
Format of Material	Paddy								
Packaging	sack								
Package Size (kg)	25.000								
Total Weight (kg)	200.000								
No. of Units	8.000								
Outstanding Units	8.000								
IFOAM	<input checked="" type="checkbox"/>								
EU	<input checked="" type="checkbox"/>								
NOP(USDA)	<input checked="" type="checkbox"/>								
COR	<input checked="" type="checkbox"/>								
JAS	<input type="checkbox"/>								
Organic Thailand	<input type="checkbox"/>								
Production Lot No.	-								
Certificate	View								
Active status	<input checked="" type="checkbox"/>								
Updated at	Sat, 3 Oct 2020 12:37:48 +0700								
M	<input type="checkbox"/>								

[Close](#)

Note

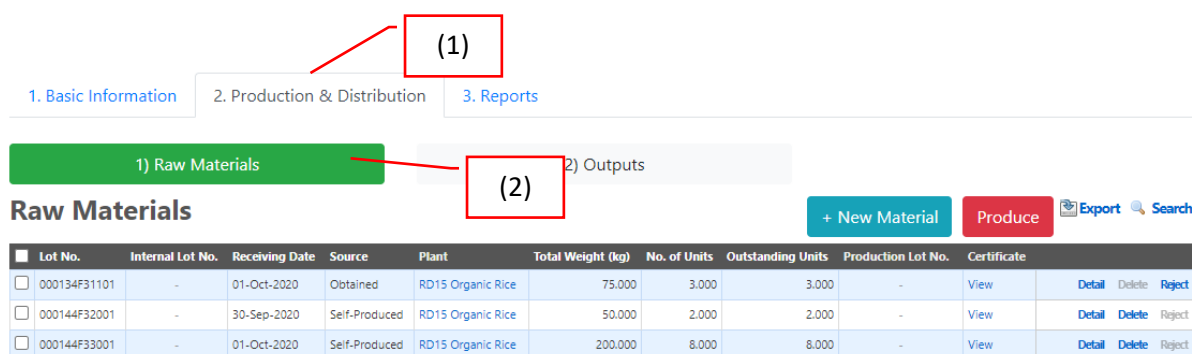
In case that the user cannot add more data after recording the raw material, the error might come from various reasons. First, total weight of raw material is greater than the total weight specified in the certificate. Second, the receiving date of the raw material is later than the expiration date of related certificate. The system shall notify the user by the red tab on the screen.

2.7. How to input 'Production'

Any production process shall begin from obtaining raw material and then produce. This section will elaborate how to turn raw material into output.

How to input 'Production'

- (1) Click on '2. Production and Distribution'
- (2) Click on '1) Raw Materials'
- (3) The system shows the list of all materials available for production. The data include those that has been recorded by the user and those sent from other users in TraceThai platform. These two types can be differentiated by looking at column 'Source'.



1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials 2) Outputs

Raw Materials + New Material Produce Export Search

Lot No.	Internal Lot No.	Receiving Date	Source	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Production Lot No.	Certificate
<input type="checkbox"/> 000134F31101	-	01-Oct-2020	Obtained	RD15 Organic Rice	75.000	3.000	3.000	-	View Detail Delete Reject
<input type="checkbox"/> 000144F32001	-	30-Sep-2020	Self-Produced	RD15 Organic Rice	50.000	2.000	2.000	-	View Detail Delete Reject
<input type="checkbox"/> 000144F33001	-	01-Oct-2020	Self-Produced	RD15 Organic Rice	200.000	8.000	8.000	-	View Detail Delete Reject

- (4) The user selects raw materials from the list by checking the boxes in front of the material and then click 'Produce'.



1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials 2) Outputs

Raw Materials + New Material Produce Export Search

Lot No.	Internal Lot No.	Receiving Date	Source	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Production Lot No.	Certificate
<input checked="" type="checkbox"/> 000134F31101	-	01-Oct-2020	Obtained	RD15 Organic Rice	75.000	3.000	3.000	-	View Detail Delete Reject
<input checked="" type="checkbox"/> 000144F32001	-	30-Sep-2020	Self-Produced	RD15 Organic Rice	50.000	2.000	2.000	-	View Detail Delete Reject
<input type="checkbox"/> 000144F33001	-	01-Oct-2020	Self-Produced	RD15 Organic Rice	200.000	8.000	8.000	-	View Detail Delete Reject

(5) Input the production details

- Certificate
- Raw Material (The system will present the selected material from previous step so the user can input the number of units that has been used in the current production. The default number is the outstanding number of units in the system. The system recognizes weights involved and it will automatically update weights of all material in each production.)
- Production Date
- Total Weight of Raw Material (This is auto calculated from the system so the user can verify the number before proceeding to the next step.)

- Outputs (In some case, there might be multiple types of output. For example, the milling of paddy rice will yield rice, rice bran, and rice hull. The system allows the user to define up to four distinctive outputs in one production. The user can input data by clicking on tab 'Output (2)' 'Output (3)' and 'Output (4)', respectively.

Each output requires data on:

- o Internal Lot Number
 - o Output Name or Brand Name
 - o Description
 - o Expiration Date
 - o Format of output such as coarse rice, husked rice, etc.
 - o Packaging such as big bag, box, bag, casket
 - o Size (in Kilogram) per Package
 - o Number of Packages
 - o Total Weight (in Kilogram)
- Show Suppliers/ Show Clients. The user can choose whether to present the 'source of raw material' or 'the customer' data in the traceability platform. If the user unchecks any box of the data item, the information of that item will not be presented to the consumers when they scan the QR code.

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials

2) Outputs

Produce

Certificate *

C040/63 [Organic Agriculture Certification Thailand (ACT)] [01-Mar-2020 to 28-Feb-2021] [RD15 Organic Rice,RD43 Organic Rice,Black Mali Nong Khai Organic Rice,Mali Nil] ▼

Raw Materials *

Lot No.	Outstanding Weight (kg)	Unit Size (kg)	Outstanding Unit	No. of unit used
000144F32001	50.0000	25.00	2.00	2.0
000134F31101	75.0000	25.00	3.00	3.0

Production Date *

02-Oct-2020

Total Raw Material Weight (kg)

125.0

Output *

Output (2)

Output (3)

Output (4)

Internal Lot No.	Output Name/Brand	Description	
Optional	Optional	Optional	
Expiration Date *	Format of Output *	Packaging	Package Size (kg) *
18-Nov-2021	Paddy	e.g. bag box	Supported 4 decimal digits
No. of Units *	Total Weight (kg) *	Show Suppliers *	Show Clients *
Supported 4 decimal digits	Supported 4 decimal digits	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Save		Cancel	

(6) Click 'Save'

- (7) The data recorded in this process will be presents as a list on '2) Output'
- Product Name/ Brand
 - Group of outputs came from the same production.
 - Lot Number for the current production that has been auto generated by the system.
 - Production Date
 - Plant Type
 - Total Weight (in Kgs.) of output
 - Unit Number
 - Outstanding Units (Inventory)
 - Certificate (Clicking on 'View' will see the master certificate)
 - QR Code consists of QR Code and 'Trace'. The user can click on the QR code icon to get the template of QR Code ready for label printing by printer. If the user clicks 'Trace', the system will show the path of production on the map similar to what the consumers shall see when they scan QR Code.

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials

2) Outputs

Outputs

Search

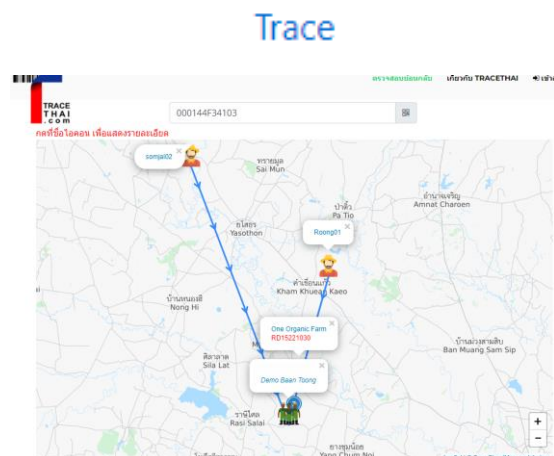
Export

Product Name/Brand	Group	Lot No.	Internal Lot No.	Production Date	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Certificate	QR	Sales Records
One Bran	2	000144F34104	BR221030	02-Oct-2020	RD15 Organic Rice	30.000	3.000	3.000	View	<div>QR</div> <div>Trace</div>	Detail Delete Sell/Send
One Brown	2	000144F34103	RD15221030	02-Oct-2020	RD15 Organic Rice	60.000	6.000	6.000	View	<div>QR</div> <div>Trace</div>	Detail Delete Sell/Send



Code: RD15221030

[พิมพ์สติ๊กเกอร์](#)



- (8) In case that there is any error in data input, the user must remove that output item by clicking 'Delete' before the system allows the user to re-enter.

2.8. How to input 'Distribution'

When the user sells or forwards output to other account, the user must enter data by clicking 'Distribution.' This data will be recorded in blockchain network. The data edit is prohibitive. After the buyer record this transaction, the buyer shall see the output of seller as 'raw material' in the system. In short, the buyer in TraceThai can skip the data entry of raw material if he purchases from another user in the system.

How to input 'Distribution'

- (1) Click on Tab '2. Production & Distribution'
- (2) Click on '2) Outputs'
- (3) The list shows all output that has been produced in previous process. The user checks the box of the item he wants to sell and click 'Sell/ Send' at the end of the row.

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials 2) Outputs

Outputs Search Export

Product Name/Brand	Group	Lot No.	Internal Lot No.	Production Date	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Certificate	QR	Sales Records
One Bran	2	000144F34104	BR221030	02-Oct-2020	RD15 Organic Rice	30.000	3.000	3.000	View		Detail Delete Sell/Send
One Brown	2	000144F34103	RD15221030	02-Oct-2020	RD15 Organic Rice	60.000	6.000	6.000	View		Detail Delete Sell/Send

- (4) Input selling data as follows:

- Lot Number
- Reference Number (This means the number of any trade document related to this transaction such as Purchasing Order Number or Bill of Lading Number)
- Selling Date
- Sell To (Name of the customer that the user can select from the list. The user can create the shortcut by selecting several customers from the drop-down list and create the favorite list. To relieve the burden of the seller, he might not need to input detail of the retail transaction.)

Buyer/Client (Optional)

--Please Select--

[Create New Client](#)

Buyer/Client (Optional)

--Please Select--

--Please Select--

Demo Kaset Rungruang ~ test4@gmail.com

Favourite List

☐ (ทดสอบ) บริษัท เจ พี อินเดอร์เทรด ~ demo166@tracethai.com

☐ ... (ทดสอบ) บริษัท ประชากรูฐกิจสามัคคีขนานนา (เรสทอริง) เพื่อสังคม จำกัด ~ demo178@tracethai.com

☐ (Demo) บมพรรัตน์ ~ demo175@tracethai.com

☒ Demo Kaset Rungruang ~ test4@gmail.com

☐ demo test ~ tchaiyo@gmail.com

☐ Demo กลุ่มข้าวอินทรีย์ไบโอดี ~ demo91@tracethai.com

☐ Demo กลุ่มน้ำมันทุ่ง ~ test2@gmail.com

☐ Demo กลุ่มเกษตรรุ่งเรือง ~ test4@gmail.com

☐ Demo กลุ่มเกษตรรุ่งเรือง (โรงบรรจุ) ~ test3@gmail.com

บันทึก Save Close

- Outstanding Weight
- Selling Weight
- Outstanding Units
- Selling Units
- Upload Transaction Certificate (Optional)

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials

2) Outputs

Distribution

Lot No.

RD15221030

Reference No.

INV311063

Selling Date

31-Oct-2020

Buyer/Client (Optional)

Demo Kaset Rungruang ~ test4@gmail.com

[Create New Client](#)

Outstanding Weight (kg)

60.0

Selling Weight (kg)

40.000

Outstanding Unit (Sack 10.0 kg)

6.0

Sold Unit (Sack 10.0 kg)

4

Transaction Certificate

Choose File No file chosen

Stored on Blockchain

Cancel

(5) Click 'Stored on Blockchain'

(6) The system will auto-generate the reference number in the sell history.

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials

2) Outputs

Outputs

Search Export

Product Name/Brand	Group	Lot No.	Internal Lot No.	Production Date	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Certificate	QR	Sales Records
One Bran	2	000144F34104	BR221030	02-Oct-2020	RD15 Organic Rice	30.000	3.000	3.000	View	Trace	Detail Delete Sell/Send
One Brown	2	000144F34103	RD15221030	02-Oct-2020	RD15 Organic Rice	60.000	6.000	2.000	View	Trace	Detail Delete Sell/Send

(7) If the user clicks on this reference number, the detail of the transaction will be shown.

One Brown	2	000144F34103	RD15221030	02-Oct-2020	RD15 Organic Rice	60.000	6.000	2.000	View	Trace	INV311063	Detail Delete Sell/Send
การขายสินค้า for RD15221030												
รหัสอ้างอิง	วันจำหน่าย	ขายให้กับ	น้ำหนักรวม (kg)	จำนวนขาย	TC	ผู้ซื้อ/ผู้ส่งออกสินค้า	QR					
INV311063	2020-10-31	Demo Kaset Rungruang	40.000	4.000			Trace					
1 Found												

2.9. How to Reject Output

As mentioned in previous section, the output of other users will be recognized and automatically appeared as raw material in the buyer's window. It is possible that the buyer might find that the physical output delivered do not meet the requirement as being agreed upon. The seller can reject the output physically by returning the output to the buyer. In addition, the seller needs to update the system by clicking 'Reject' in this menu. The transaction data on blockchain cannot be edited but the new record will be created on blockchain to create trail that the previous record has been revoked and all outputs are returned to the buyer.

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials 2) Outputs

Raw Materials + New Material Produce Export Search

Lot No.	Internal Lot No.	Receiving Date	Source	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Production Lot No.	Certificate
000144F34103	RD15221030	31-Oct-2020	Obtained	RD15 Organic Rice	40,000	4,000	4,000	-	View

[Detail](#) [Delete](#) [Reject](#)

On the seller side, the seller will be notified in 'Sales Records' and the reference number is in red. This signals that the output has been delivered but rejected by the buyer.

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials 2) Outputs

Outputs Search Export

Product Name/Brand	Group	Lot No.	Internal Lot No.	Production Date	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Certificate	QR	Sales Records
One Bran	2	000144F34104	BR221030	02-Oct-2020	RD15 Organic Rice	30,000	3,000	3,000	View	Trace	Detail Delete Sell/Send
One Brown	2	000144F34103	RD15221030	02-Oct-2020	RD15 Organic Rice	60,000	6,000	2,000	View	Trace	INV311063 Detail Delete Sell/Send

If the seller clicks on 'Sales Records', the system shows detail of the transaction in which there appears the checked box on 'Rejected by Buyer'. The seller can remove this transaction by clicking 'Delete' at the end of the row. The returned output shall be reverted to the seller inventory waiting to be resold or inspected.

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials 2) Outputs

Outputs Search Export

Product Name/Brand	Group	Lot No.	Internal Lot No.	Production Date	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Certificate	QR	Sales Records
One Bran	2	000144F34104	BR221030	02-Oct-2020	RD15 Organic Rice	30,000	3,000	3,000	View	Trace	Detail Delete Sell/Send
One Brown	2	000144F34103	RD15221030	02-Oct-2020	RD15 Organic Rice	60,000	6,000	2,000	View	Trace	INV311063 Detail Delete Sell/Send

การขายสินค้า for RD15221030

รหัสอ้างอิง	วันจำหน่าย	ขายให้กับ	น้ำหนักรวม (kg)	จำนวนขาย	TC	ผู้ซื้อปฏิเสธสินค้า	QR
INV311063	2020-10-31	Demo Kaset Rungruang	40,000	4,000		<input checked="" type="checkbox"/>	Trace

1 Found

2.10. How to access QR Code

The user can access to the QR Code in order to print the label from the 'Output' menu.

- (1) Click on '2. Production & Distribution'
- (2) Click on '2) Outputs'
- (3) Click on the QR code icon of the designated production record.

1. Basic Information 2. Production & Distribution 3. Reports

1) Raw Materials 2) Outputs

Outputs

Product Name/Brand	Group	Lot No.	Internal Lot No.	Production Date	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Certificate	QR	Sales Records
One Bran	2	000144F34104	BR221030	02-Oct-2020	RD15 Organic Rice	30,000	3,000	3,000	View	Trace	
One Brown	2	000144F34103	RD15221030	02-Oct-2020	RD15 Organic Rice	60,000	6,000	2,000	View	Trace	INV311063

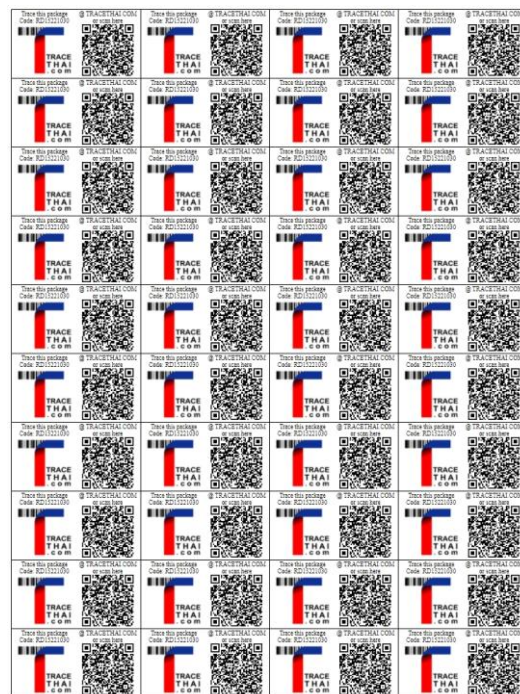
QR Code

- (4) The system will show the QR Code of that production lot such that the user can save the picture from the screen or directly print the label. Please note that TraceThai platform prepares the label sticker based on A4 size sticker.



Code: RD15221030

พิมพ์สติกเกอร์

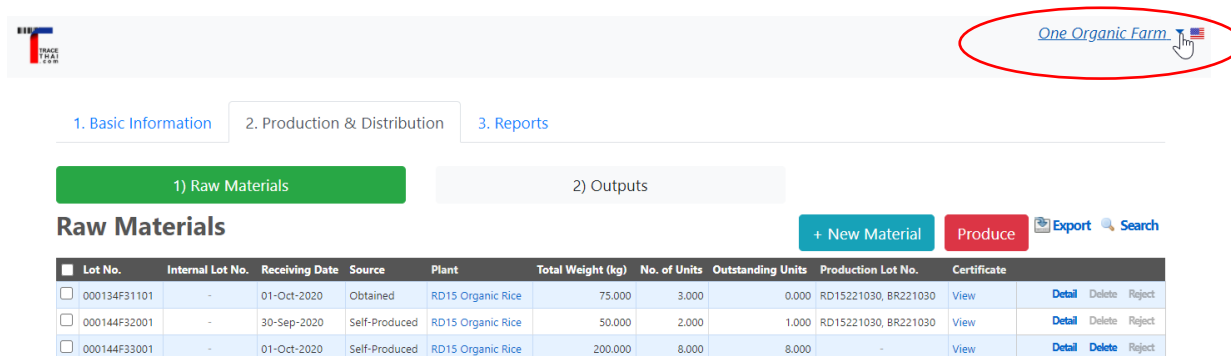


2.11. How to create new profile

Each user can create multiple profiles for convenient management. In case of the operator wants to record information of each production unit separately, such as rice milling, packaging. Each production unit can show a separate search location. For example, the operator create 2 profiles, the first one is a rice mill that receives paddy from farmers, The second is a packing house that receive rice from the mill profile and prepare the product for retail sales. When consumer search in the traceability system, the result will be displayed from the mill profile sent to the packing house profile.

How to create new profile

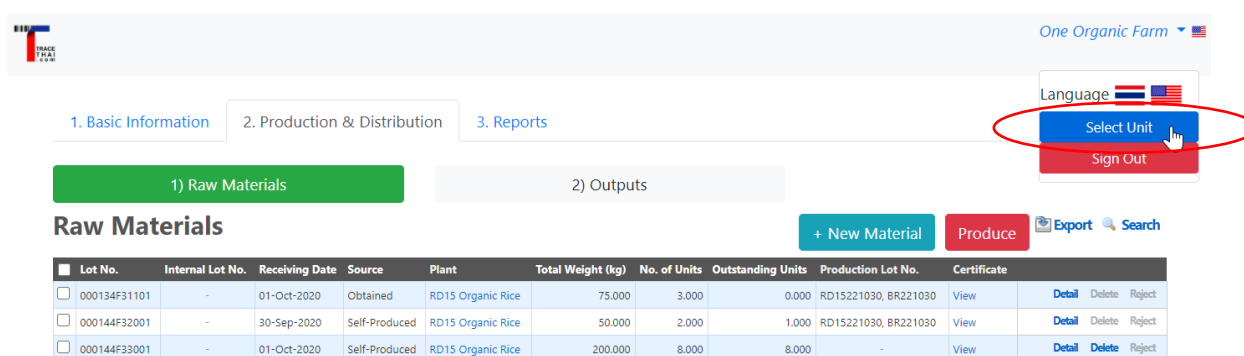
1) Click on “Account Name” in the top right corner of the screen.



The screenshot shows the TraceThai.com interface. In the top right corner, the account name "One Organic Farm" is displayed next to a dropdown arrow and a flag icon, and it is circled in red. Below the header, there are three tabs: "1. Basic Information", "2. Production & Distribution", and "3. Reports". Under "1. Basic Information", there are two sub-tabs: "1) Raw Materials" (highlighted in green) and "2) Outputs". The "Raw Materials" section shows a table with columns: Lot No., Internal Lot No., Receiving Date, Source, Plant, Total Weight (kg), No. of Units, Outstanding Units, Production Lot No., and Certificate. The table contains three rows of data for "RD15 Organic Rice".

Lot No.	Internal Lot No.	Receiving Date	Source	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Production Lot No.	Certificate
000134F31101	-	01-Oct-2020	Obtained	RD15 Organic Rice	75.000	3.000	0.000	RD15221030, BR221030	View
000144F32001	-	30-Sep-2020	Self-Produced	RD15 Organic Rice	50.000	2.000	1.000	RD15221030, BR221030	View
000144F33001	-	01-Oct-2020	Self-Produced	RD15 Organic Rice	200.000	8.000	8.000	-	View

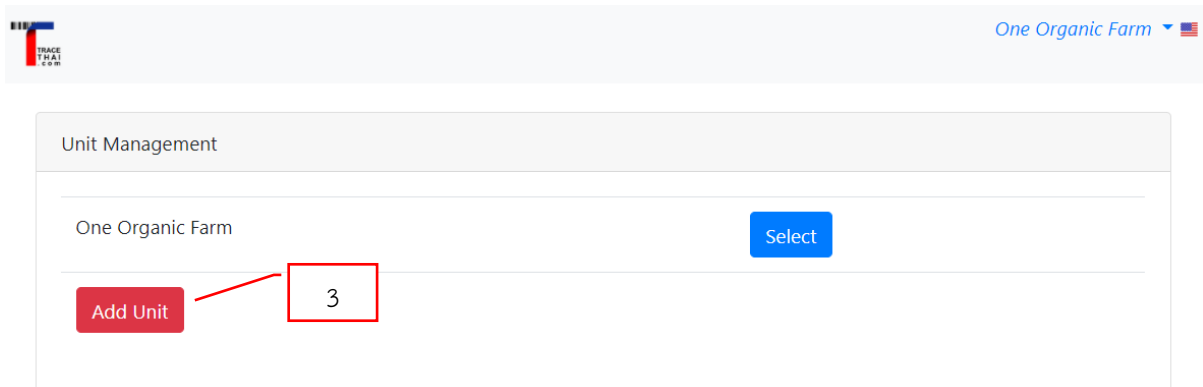
2) The system will show a sub-menu to select, click on “Select Unit”



The screenshot shows the TraceThai.com interface. In the top right corner, there is a dropdown menu with the account name "One Organic Farm" and a flag icon. Below it, there is a "Language" dropdown menu with Thai and English flags. Below the language menu, there is a "Select Unit" button (highlighted in red) and a "Sign Out" button. Below the header, there are three tabs: "1. Basic Information", "2. Production & Distribution", and "3. Reports". Under "1. Basic Information", there are two sub-tabs: "1) Raw Materials" (highlighted in green) and "2) Outputs". The "Raw Materials" section shows a table with columns: Lot No., Internal Lot No., Receiving Date, Source, Plant, Total Weight (kg), No. of Units, Outstanding Units, Production Lot No., and Certificate. The table contains three rows of data for "RD15 Organic Rice".

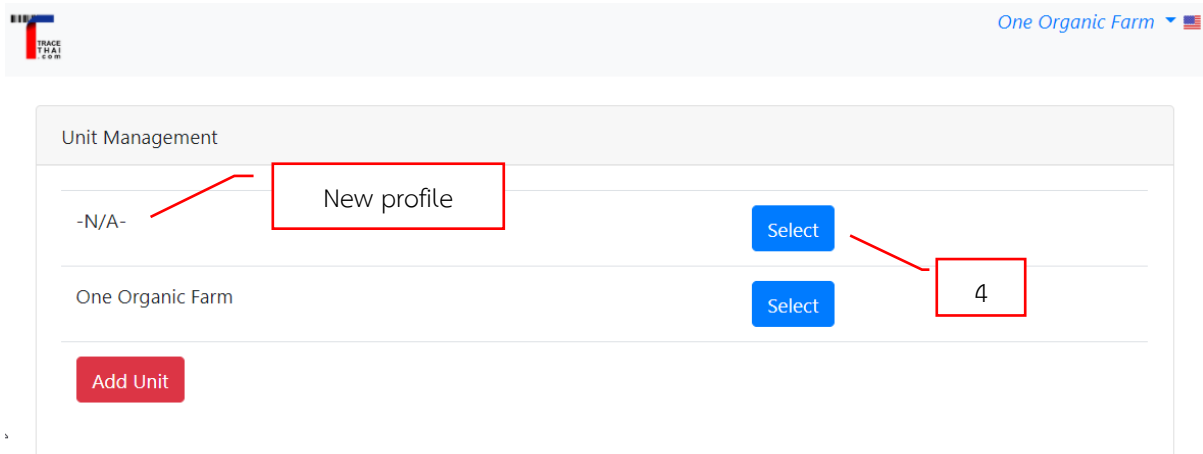
Lot No.	Internal Lot No.	Receiving Date	Source	Plant	Total Weight (kg)	No. of Units	Outstanding Units	Production Lot No.	Certificate
000134F31101	-	01-Oct-2020	Obtained	RD15 Organic Rice	75.000	3.000	0.000	RD15221030, BR221030	View
000144F32001	-	30-Sep-2020	Self-Produced	RD15 Organic Rice	50.000	2.000	1.000	RD15221030, BR221030	View
000144F33001	-	01-Oct-2020	Self-Produced	RD15 Organic Rice	200.000	8.000	8.000	-	View

3) Click on “Add new unit”



The screenshot shows the 'Unit Management' section of the TraceThai.com interface. At the top right, it says 'One Organic Farm' with a dropdown arrow and a Thai flag. Below this, there is a table with one row containing 'One Organic Farm' and a 'Select' button. At the bottom left of the table, there is a red 'Add Unit' button. A red line points from this button to a red box containing the number '3'.

4) The system will create new production unit profile. All menu and usage is the same as the previous unit. The user need to name the new profile by clicking on “Select” to enter the profile name first.



The screenshot shows the 'Unit Management' section after a new unit has been added. The table now has two rows. The first row has '-N/A-' in the first column and a 'Select' button in the second column. A red line points from the 'Select' button to a red box containing the number '4'. The second row has 'One Organic Farm' in the first column and a 'Select' button in the second column. At the bottom left, there is a red 'Add Unit' button. A red line points from the 'Add Unit' button to a red box containing the text 'New profile'.

5) On the general informagion page, the user enter new profile name in the field “Company Name/ Employer Neme”

กรุณามั่นทึก Profile ให้สมบูรณ์ก่อนเริ่มใช้งาน

×



1. Basic Information

2. Production & Distribution

3. Reports

1) Profile

2) Members

3) Fields

4) Certificates

Profile

5

Latest Update: 2020-10-18 14:55:39 +0700

Company Name/Entrepreneur Name *

required

Picture(1)

Picture(2)

Choose File

No file chosen

Choose File

No file chosen

Storytelling

File Edit View Insert Format Tools Table



Paragraph



B

I



6) When the user click on “Select Unit” the next time, there will be new profile for the user to enter information.



One Organic Exporter

Unit Management

One Organic Exporter

Select

One Organic Farm

Select

Add Unit

Choose
Profile to
enter data.

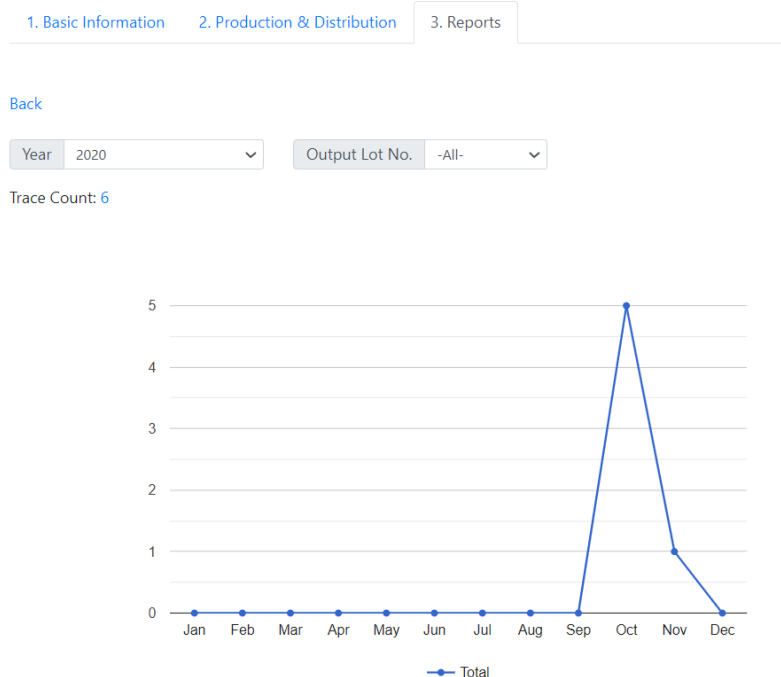
2.12. Report

The user can monitor how the user scan QR code for marketing intelligence or spot the irregularities in the market. The user clicks on 'Reports' and then click 'QR Code Scanning Records.'

1. Basic Information 2. Production & Distribution 3. Reports

- [QR Code Scanning Records](#)

The platform allows the user to select the period to view the result.



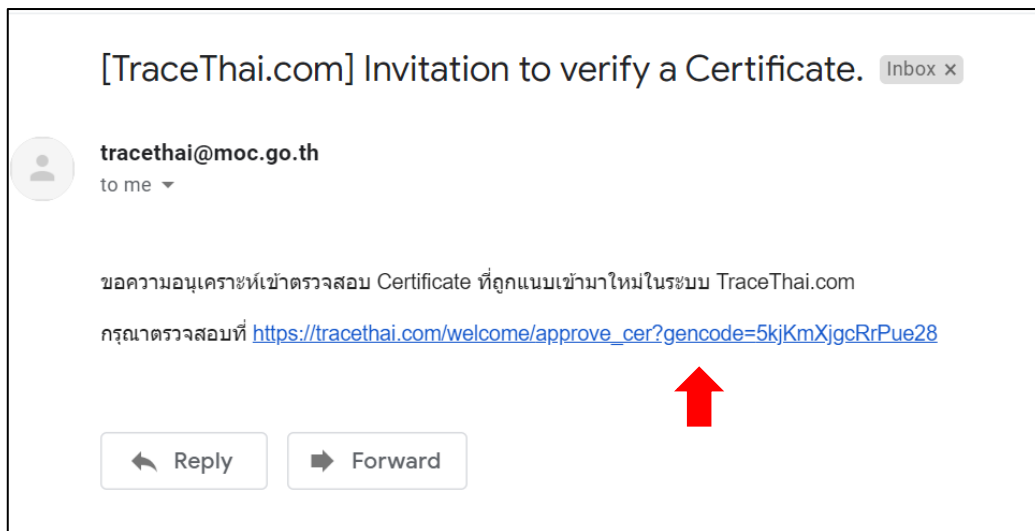
The system shows how many times each lot number has been scanned, where (inferred from IP Address), and when.

Trace Histories [2020]

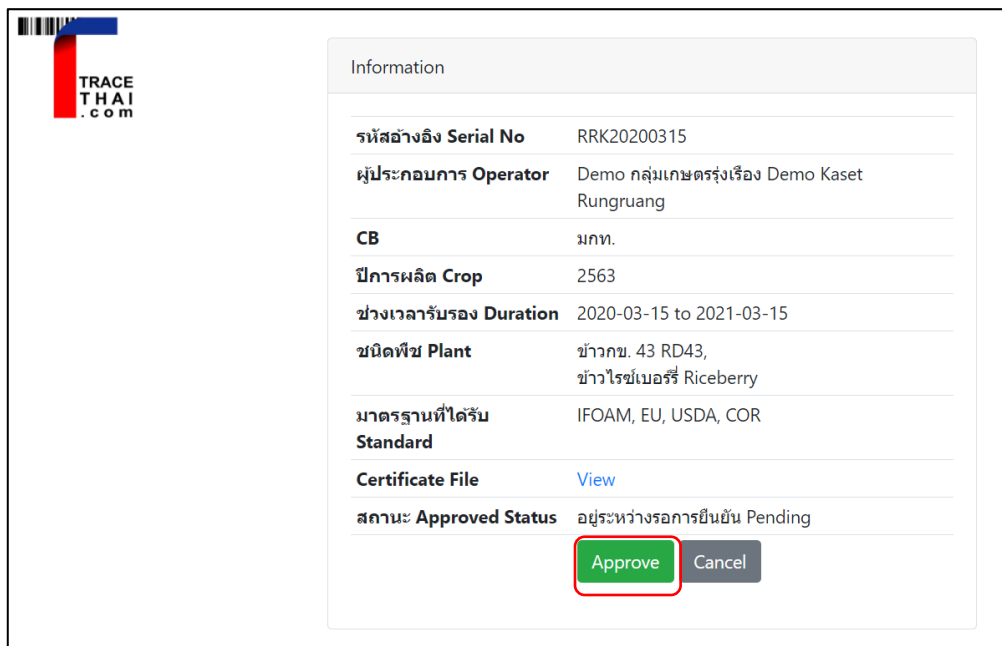
ID	Lot No.	IP Address	Location	Date
1771	0002A4F35101	66.249.79.230	Ashburn,US 20149	16-Nov-2020
1611	0002A4F35101	171.98.69.146	Bangkok,TH 10100	31-Oct-2020
1610	0002A4F35101	171.98.69.146	Bangkok,TH 10100	31-Oct-2020
1609	0002A4F35101	171.98.69.146	Bangkok,TH 10100	31-Oct-2020
1608	0002A4F35102	171.98.69.146	Bangkok,TH 10100	31-Oct-2020
1607	0002A4F35102	171.98.69.146	Bangkok,TH 10100	31-Oct-2020

3. How to Endorse the Certificate

The Certifying Body (CB) plays an important role in verifying the validity of the certificate uploaded by the operators. Once the operator records the certificate with issuing CB, TraceThai will notify CB by e-mail. The CB needs not to enter the platform. The CB can endorse or cancel the certificate by clicking link embedded in the e-mail.




This link will lead the CB to TraceThai.com and show the details of the certificate claimed by the operator. The CB can either endorse the certificate by clicking 'Approve'.



Once the CB approves the certificate, the information shown in the traceability will show 'Confirmed by CB' and the dark green icon.

Information

General		Product Lot
Name	Demo กลุ่มเกษตรรุ่งเรือง Demo Kaset Rungruang	
		
Certificate	ข้าวข. 43 RD43, ข้าวไรซ์เบอร์รี่ Riceberry [IFOAM,EU,USDA,COR] View Certification Body: มกท. ● Verified by CB, 7-Aug-20	
Address	111 ต.กาญจนนาภิเษก	
Tel	022542345	

In case that TraceThai verifies the certificate based on public data available on the internet, the system will show 'Verified by Link' and the user can click the link that lead to the source of the proof.



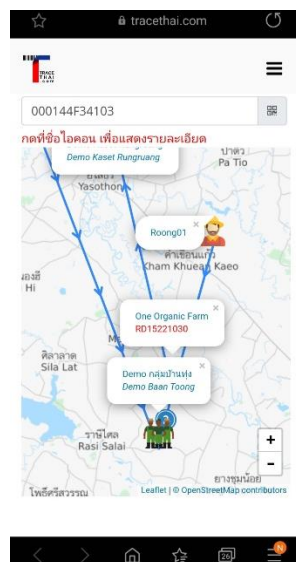
Certificate	ข้าวข. 43 RD43 Organic Rice, ข้าวทับทิมชุมแพ RD69 (Tubtim Chumphae) Organic Rice, ข้าวมะลิต้นทองค้าย Black Mali Nong Khai Organic Rice, ข้าวมะลิสีสุรินทร์ Mali Nil Surin Organic Rice, ข้าวหอมปทุมเทพ Hom Pathum Thep Organic Rice, ข้าวหอมมะลิแดง Red Hommali Organic Rice, ข้าวไรซ์เบอร์รี่ Riceberry Organic Rice [IFOAM,EU,USDA,COR] View Certification Body: สำนักงานมาตรฐานเกษตรอินทรีย์ (มกท) Organic Agriculture Certification Thailand (ACT) ● Confirmed by Link, 05-Oct-20
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4. Traceability for the Consumer

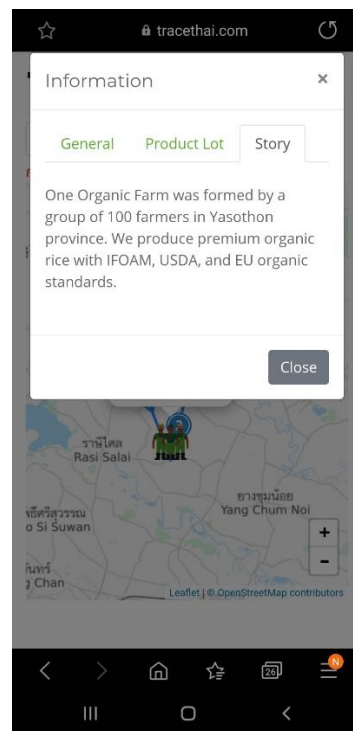
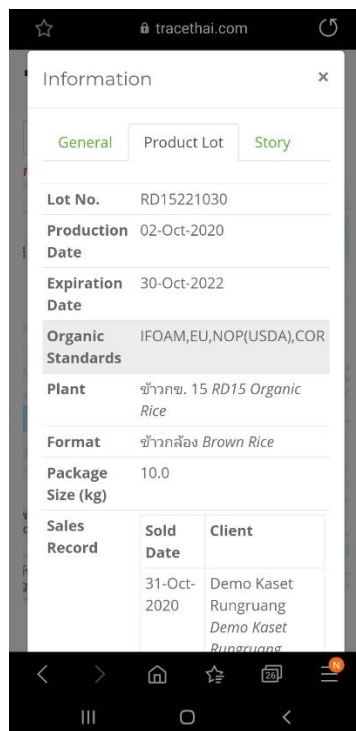
The consumer can trace where the food comes from by using the smart phone to scan the QR code on the produce. Alternatively, the consumer can access TraceThai.com and enter Lot Number to trace the origin of the product. The data stored on Blockchain will be displayed on the map which allows the consumer to trail where the product passed.



Code: RD15221030



The consumer can seek more information on the producer by clicking on the icon. Related information such as details of operator, certificate can be accessed by clicking on related icons.



Transaction

Short Tx.: 962...bc7 mBTC: 0.00
Block.: 478605 Date: 04/11/2020
Links: 1 / 28 [CLICK TX. FOR MORE LINKS](#)

