

Date: 13 Augst 2018

Dept: ENERGYMEET

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Category Code: Research\_01

Recorder: Takuya Onishi

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TITLE: Cricket Farm Survey in Thailand in 2018

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ENTOMFARM\_Cricket Farming Design Process

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Remarks

Dr. Yupa introduced me to a cricket farm in Thailand. Lopburi are special production localities of Cricket, there are 145 farmers in Lopburi, and there are also 200 farmers in the south. Mr. Ron who runs Nopadon farm produces and sells insects based on the guidance of Dr. Yupa. Mr. Ron 's farm is also a base to support the overall production of Lonburi by sharing production knowledge to surrounding farmers and helping the production process such as egg replacement, cooking and so on.

Visitor



● Yupa Hanboonsong  
- Associate Professor at Khon Kaen University(Entomologist)



● Takuya Onishi  
- Co-founder of ENERGYMEET  
- Associate professor, Faculty of Environment and Information Studies, Keio University

Farm Owner



● Noppadon Phannarai  
- Crcket Producer  
- Noppadon-ph@hotmail.com  
○ Nopadon Farm  
- Tha Luang, Tha Luang District, Lopburi 15230, Thailand  
- https://food-products-supplier-548.business.site/

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Yupa Hanboonsong

Noppadon Phannarai

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● Good Agruculture Practice for Cricket

Dr. Yupa served as advisor at Ministry of Agriculture and Cooperatives in Thailand "ACFS (The National Bureau of Agricultural Commodity and Food Standards)" in 2016-17. Currently, Dr Yupa is asked to ACFS and is writing "Good Agriculture Practice for Cricket" (GAP) for the first time in the world. In writing "GAP", Dr Yupa repeated public hearing, and this time the cricket farm inspection was part of that.

○ Main contents of "GAP"

- Establish safety of consumers, Labors, and Environment
- Infrastructure and Management
  - Balance between living space and industrial facilities
  - Environment check (for waste)
  - Material check
  - On the smell of insects

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Six-legged livestock:edible insect farming, collecting and marketing in Thailand(2013)

- Yupa Handoonsong/Tasanee Jamjanya/Patrick B. Durst



EDIBLE INSECTS IN LAO PDR:BUILDING ON TRADITION TO ENHANCE FOOD SECURITY(2014)

- Yupa Handoonsong/Patrick B. Durst



Myanmar

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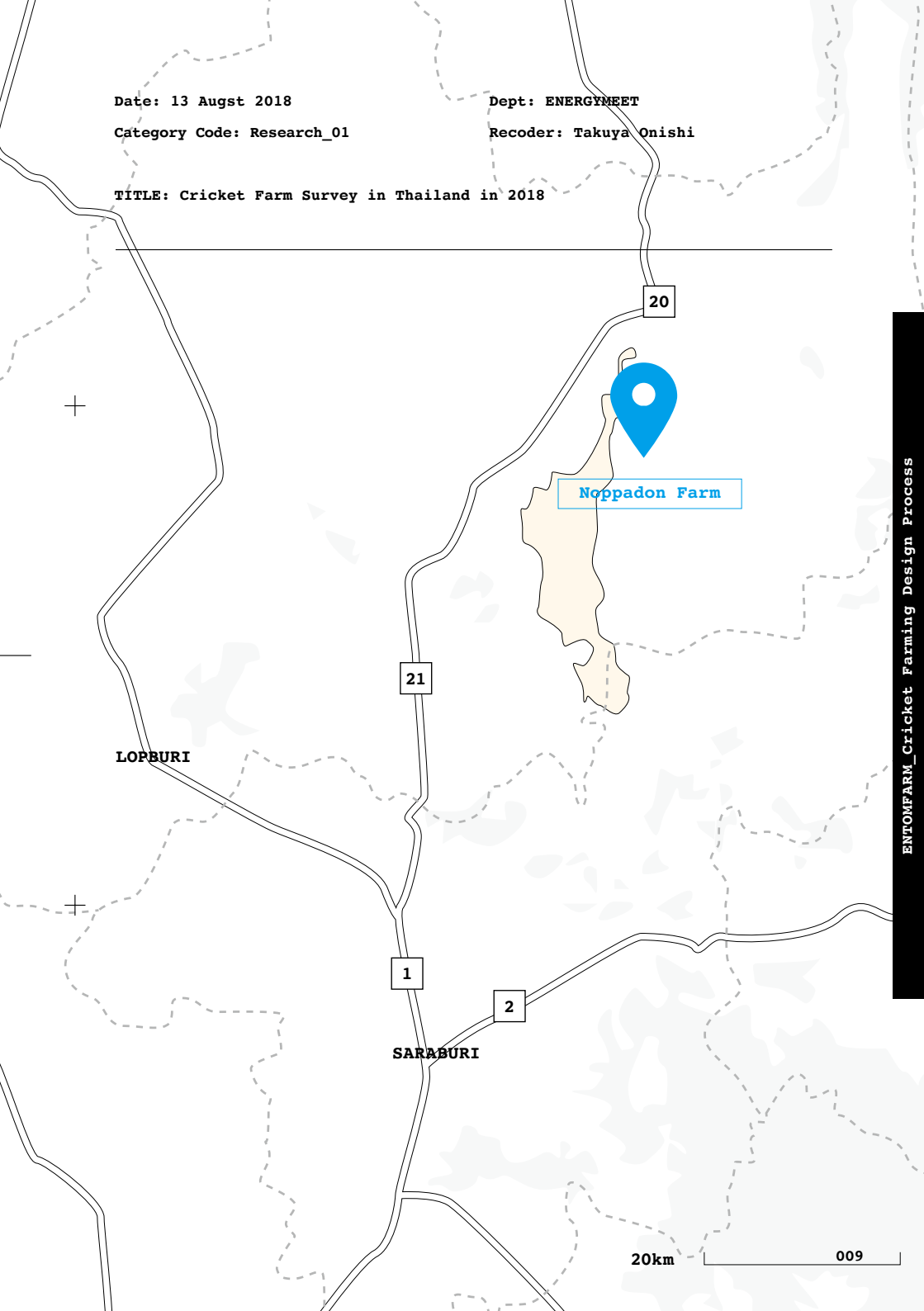
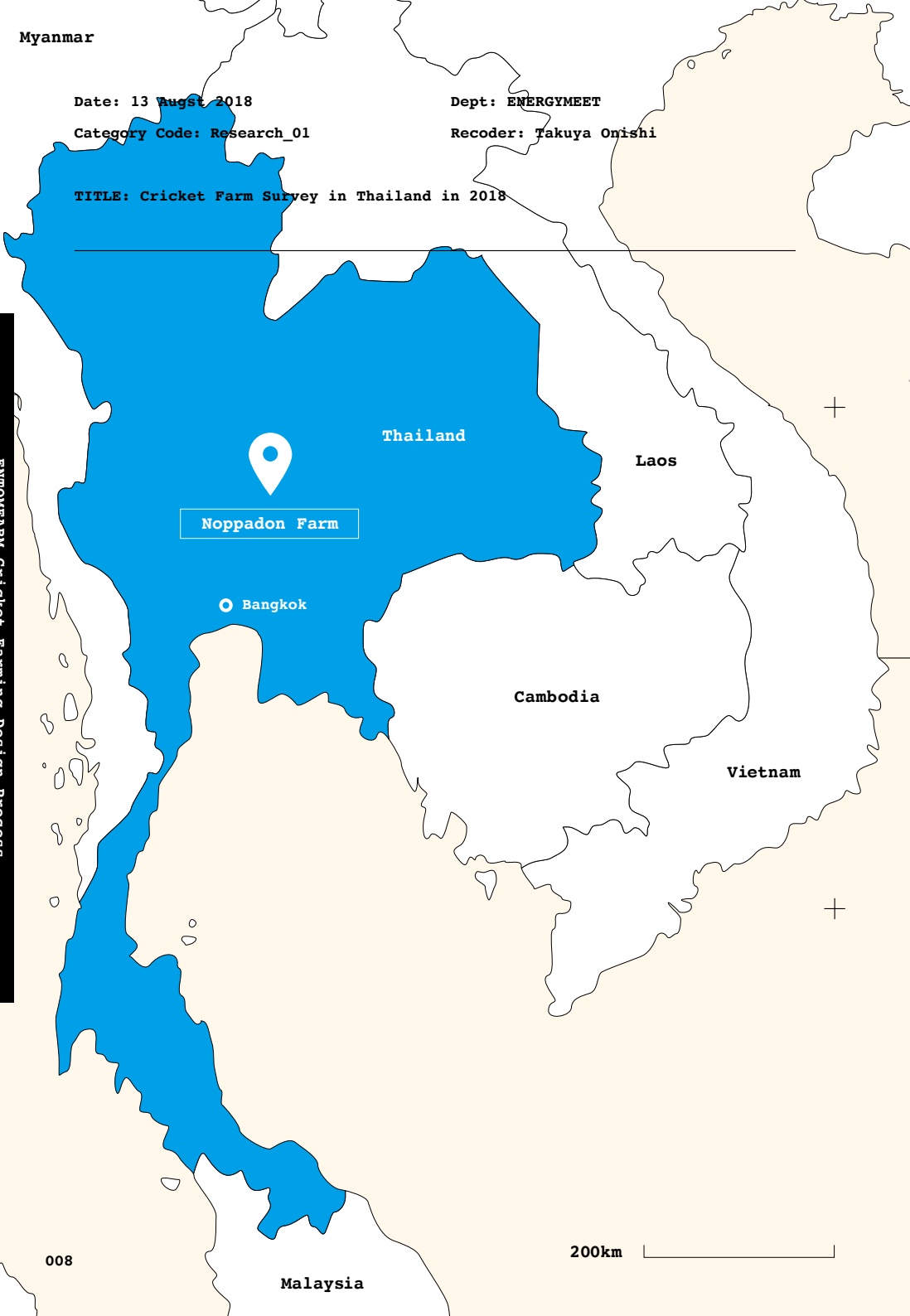
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● Basic Information of Noppadon Farm

- Harvest - 55-60days
- Produce - 20-30kg/unit  
\*total 52units
- Price - 150-200THB/kg (4.6-6USD/kg)  
\*Rate:2018.8.30
- Profit - 500,000THB/month(15,281USD/month)

+



Units are numbered



+



Bar can be easily removed

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Bait on the egg pack

+



Powdery bait



Such an soil



Egg Pack lines vertically

+



Bottom up with bamboo



Protection against Ants

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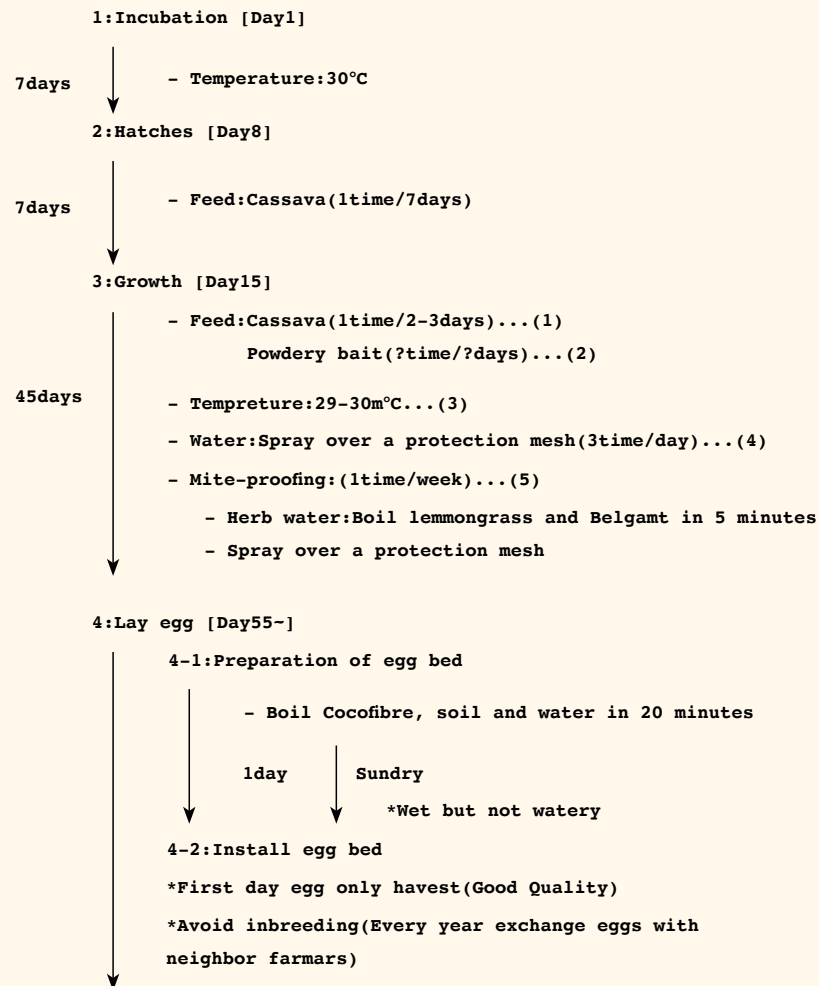
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● Cricket Production Process

○ Breeding Process



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5:Harvesting [Day55-60]...(6)



7:Hygine...(7)

- Heat solution by gas burner



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1,2:Cassava and Powdery bait

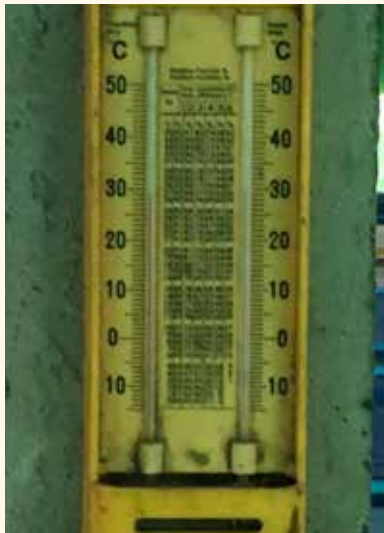


1:After eating

+ +



4:Spray over the mesh



3:Around 29°C



4:Purified water

+ +



4:Sprayed mesh



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5:White dots are mite

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5:Herb water in yellow tank



6:After harvest

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○ Cooking Process

\*Produce 10t/month

1: Pressured Cooker

- Fry well in a pressure cooker...(1)

2: Oil Thumblr Drum

- Cut off oil with a tumbler...(2)

3: Oven

- Bake in the Oven...(3)

- 80°C

- 2 hours

- Ingredient in to oven together to  
take off the odor of insects...(4)

4: Blender

- Mix with ingredients...(5)

- Herbs, Chile, etc...

5: Packaging

- Enclose nitrogen gas...(6)

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Processing facilities



1: Pressured cooker



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2:Oil thumblr drum



2:After Cutting the Oil

+

+



3:Oven

+

+



5:Mix with ingredients



4:Ingredients in the oven



5:Blender



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5:After mixing



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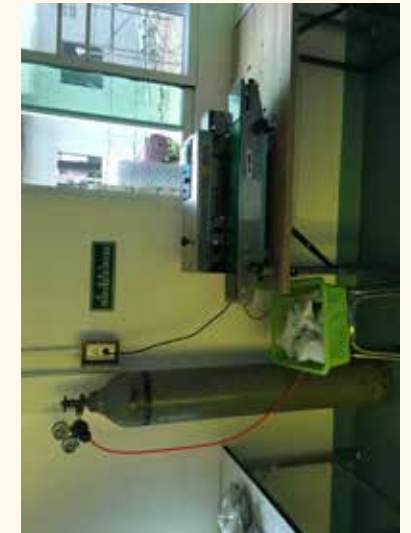
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6:Packaging



6:Nitrogen gas machine



6:Enclose gas



Package Design