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## Questionnaire

### Farmers' Perception and Adaptation of Organic Vegetable Farming in Chiang Mai Province

By

Nathitakarn Pinthukas ID: 520852001

Ph.D. Student of Agricultural Extension and Rural development

No.: ..... Date of Interview: .....

Name of informant: .....

Address:

.....

Name of enumerator.....

#### A. GENERAL INFORMATION

1. Farmers and family member's age, education, and involvement in organic vegetable farming activity

No.	Head of HH and family member	Relation with HH	Age (year)	Gender <sup>(a)</sup>	Education	Status <sup>(b)</sup>	involvement in organic vegetable farming activity <sup>(c)</sup>

<sup>(a)</sup>1 = Male, 2 = Female; <sup>(b)</sup>M: Married, S: Single, W: Widow; 1 = >10yrs, 2 = 5-10yrs, 3 = 1-4 yrs.

## 2. Condition of Farming System and Land Tenure Status

No.	Land owned (rai)	Land status (rai)					
		Owned	Rented	Mortgaged	Rent out	share	Others

Note: Others, such as: plantation crops, ponds, fisheries, etc.

## 3. Cropping pattern

Plot No.	Total Land Used (rai)	Crops	Time												Remarks	
			J	F	Ma	A	M	J	Ju	Ag	S	O	N	D		

## 4. Labor utilization

Plot No.	Total Land Used (rai)	Crops	Activity Code <sup>(1)</sup>	Labor need		
				Family	Labor sharing	Hired labor

<sup>(1)</sup> Code of Activity: P1 = Plough; P2 = weeding; P3 = fertilizer used management; P4 = pest and diseases management; P5 = watering; P6 = harvesting; P7 = ; P8 = ; P9 = irrigation process; P10 = others, please specify

5. Yield and output distribution

Plot No.	Crops	Production		For Consume		For Sale	
		Yield (Kg/ha)	Total (Baht)	Yield (Kg/ha)	Total (Baht)	Yield (Kg/ha)	Total (Baht)

6. Soil fertility

( ) Very good ( ) Good ( ) Poor

7. Livestock data

No.	Kind of livestock	Amount	Income (baht)

8. Credit

No.	Sources	Amount

9. Cost

No.	Activities	Cost (baht)		Total (baht)
		Labor	Tool	
1	Soil preparation			
2	Seeding			
3	Planting			
4	Weeding			
5	Pest management			
6	Harvest			

10. Current household have debt or not

have  Don't have

11. Resource of debt and how much?

Neighbor amount.....THB

Local merchant amount.....THB

Bank for agriculture and agricultural cooperatives  
=====amount.....THB

Organic agricultural cooperative  
amount.....THB

Urban community fund amount.....THB

Other (if any)..... amount.....THB

12. Status of social leadership

Yes  Village chief  Headman  
= The village committee  Council district /

municipality

= Youth leaders  Agricultural

Leadership

= Paraprofessionals  Other (if

any).....

No

13. Status of Agricultural membership

- No  
 Yes  Agricultural group  Agricultural Housewife

Group

- Farm youth  BAAC group  
 Agricultural cooperative  Organic agricultural group  
 Other (if any).....

14. Have you ever participated in organic training matter in some of the following?

- Organic rice production  Organic vegetable production  
 Organic Integrated farming  Bio-extract  
 Bio-fertilizer  Green manure

15. Resource of Organic agricultural production

- Department of Agriculture  Center of new theory farming  
 Agricultural Extension Officer  Farmers Promotion and

Development Group

- NGO  Volunteer soil technicians  
 Neighbors and relatives  Documents  
 Radio/TV  Organic farming organizer day

campaign

16. How to gain organic agricultural knowledge?

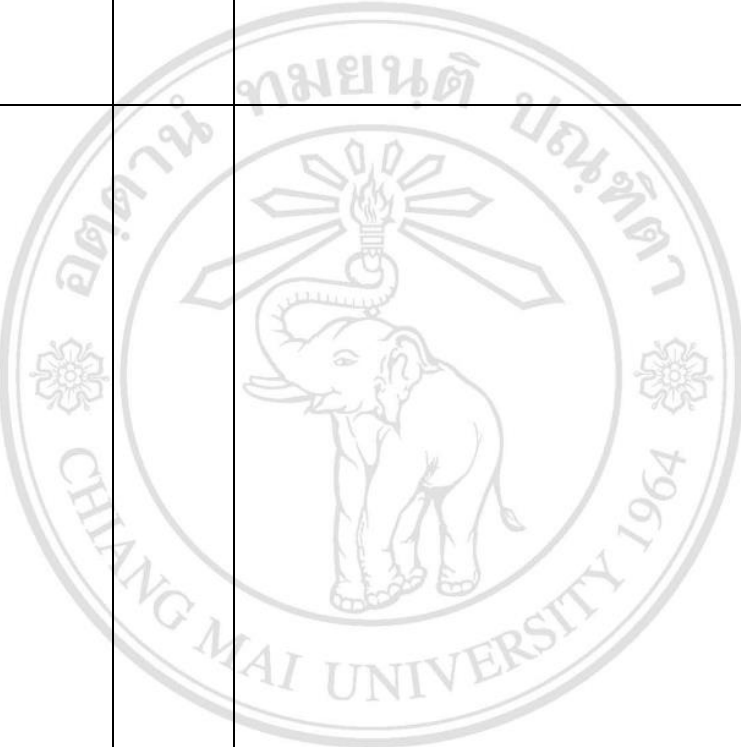
- Training  
 Documents reading  
 Agricultural Extension Officer advisement  
 Listen to TV programs such as agriculture  
 Visiting the farmer who produced successful  
 Other (if any).....

17. How often do you contact with agricultural extension officer?

- 1 - 2 times per year  3 - 4 times per year  
 5 - 6 times per year  more than 6 times per year

**B: Knowledge of Organic Vegetable Production**

Detail of practice	Level of knowledge		Farmers' practice	
	know	Don't know	Past	Present
<p><b>1.Cultivated field background</b></p> <p><b>1.1 Duration of chemical disuse</b></p> <ul style="list-style-type: none"> <li>- An area where chemicals have never been used in order to perform organic agriculture for at least 6 months.</li> <li>- In the annual crop field, the duration of chemical disuse must be longer than 12 months.</li> <li>- In the perennial field, the duration of chemical disuse must be longer than 18 months.</li> <li>- A farmer must perform organic agriculture for 36 months in order to be approved as an organic agriculture (Since the time applying for approval). It is a standard for the transition period.</li> </ul> <p><b>1.2 Regulations after approval acquired</b></p>				

<p>- The approved farmers must convert all cultivated areas to organic agriculture within 4 years. A written plan of conversion is required.</p>				
<p><b>2. Overall condition of the fields</b></p> <p><b>2.1 Deforestation</b></p> <p>- Do not encroach on forest area. If the cultivated area is in the forest area, document of right is required (e.g. a document which is approved by the government or local administration organization).</p> <p><b>2.2 Soil conservation and soil erosion prevention</b></p> <p>- Ground cover plants are needed to help prevent soil erosion in the steep slope area.</p> <p><b>2.3 Distance from an agrochemical field</b></p> <p>- Vegetable garden and fruit orchard must be located at least 1-8 meters away from farm field under agrochemical use.</p> <p>- Rice field must be located at least 1-8</p>			 <p>ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่ Copyright © by Chiang Mai University All rights reserved</p>	



meters away from a farm field under agrochemical use.

#### **2.4 How to prevent chemical contaminants via wind**

- Vegetable garden and fruit orchard must have plants as a windbreaker or barrier at least 1-8 meters wide.
- Rice field must have plants barrier at least 1-8 meters wide.

#### **2.5 Insect attractant and repellent plants**

- Plant insect attractant and repellent plants spreading throughout 1% of the field.

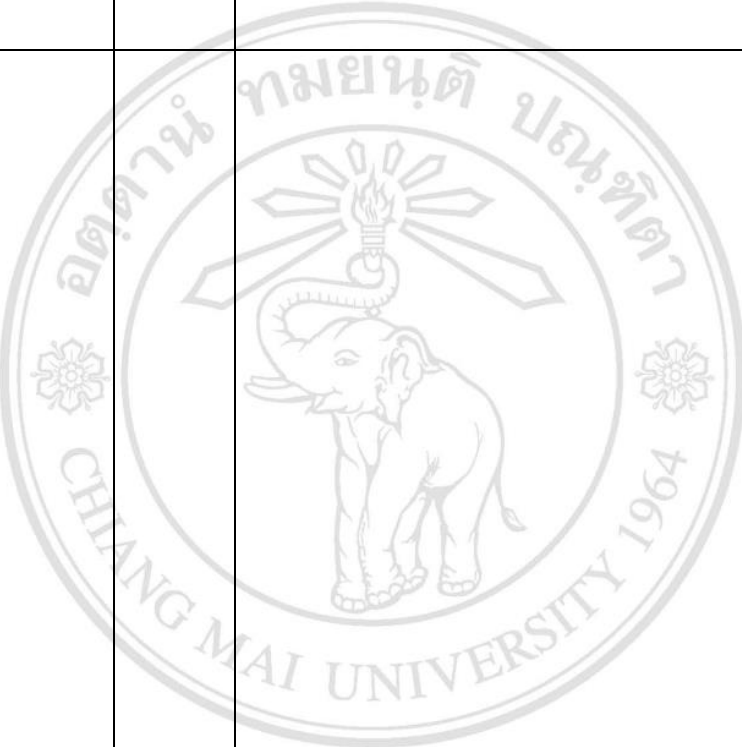
#### **2.6 Biodiversity**

- There must be at least 10 types of plants and living organisms that are useful in the area proposed for approval.

#### **2.7 Collection, selection, and improvement of native plants**

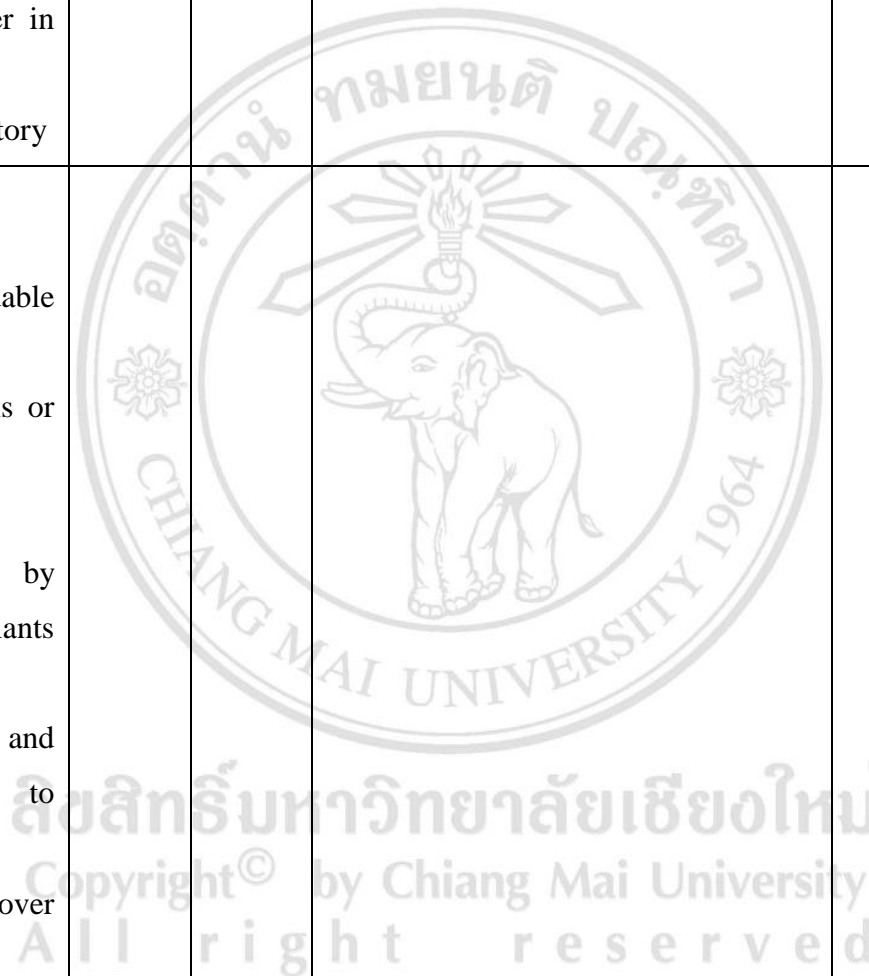
- Collect, select, and improve native plants continuously.



<p><b>2.8 Genetically Modified Organisms</b></p> <ul style="list-style-type: none"> <li>- Do not plant, raise, or use genetically modified organisms in the field.</li> </ul>				
<p><b>3. Soil</b></p> <p><b>3.1 Soil improvement</b></p> <ul style="list-style-type: none"> <li>- Use only organic fertilizers for plantation.</li> <li>- Raise animals to use as an organic source with the appropriate number that balance with the farming area.</li> <li>- Record purchase confirmation of organic matter supplement on the farm account.</li> <li>- Always ferment organic matters before using</li> <li>- Planting crop for soil fertility.</li> <li>- Planting cover crops to improve soil.</li> <li>- Soil preparation as well as the plow and harrow.</li> </ul> <p><b>3.2 Soil conservation</b></p> <ul style="list-style-type: none"> <li>- Do not use chemical fertilizers.</li> <li>- Do not burn dead plants/ organic matters</li> </ul>			 <p>ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่ Copyright © by Chiang Mai University All rights reserved</p>	

<p>in the farm.</p> <ul style="list-style-type: none"> <li>- Do not use genetically engineered microbes.</li> </ul> <p><b>3.3 Environment and Soil Fertility</b></p> <ul style="list-style-type: none"> <li>- There are earthworms or living organisms in the soil.</li> <li>- Organic matters can be found in the soil at least 2%.</li> <li>- Soil is friable.</li> </ul>				
<p><b>4. Fertilizers management</b></p> <p><b>4.1 Organic matter</b></p> <ul style="list-style-type: none"> <li>- Always ferment organic matters before using (e.g. manure).</li> <li>- Do not use manure from non-organically raised livestock.</li> <li>- Document usage information including time of usage and source of manure.</li> <li>- Do not use organic fertilizer as a precursor or a composition.</li> <li>- Do not use heavy metals-contaminated organic fertilizer.</li> <li>- Do not use waste from urban area or</li> </ul>				

<p>municipality.</p> <ul style="list-style-type: none"> <li>- Do not use excrement.</li> <li>- Do not blend slick or inked paper in organic fertilizer.</li> <li>- Do not use waste from industrial factory</li> </ul>				
<p><b>5. Weed and pest</b></p> <p><b>5.1 Weed management</b></p> <ul style="list-style-type: none"> <li>- Do not cover soil with biodegradable plastic.</li> <li>- Do not use weed control chemicals or herbicide.</li> </ul> <p><b>5.2 Plant diseases and pest</b></p> <ul style="list-style-type: none"> <li>- Restore agricultural environment by planting attractant and repellent plants and crop rotation.</li> <li>- Do not use herbal extracts and prohibited substances according to transitory provision.</li> <li>- There should be a biodiversity all over the area.</li> <li>- Do not use detergents or synthetic chemical sticking agent or synthetic</li> </ul>				

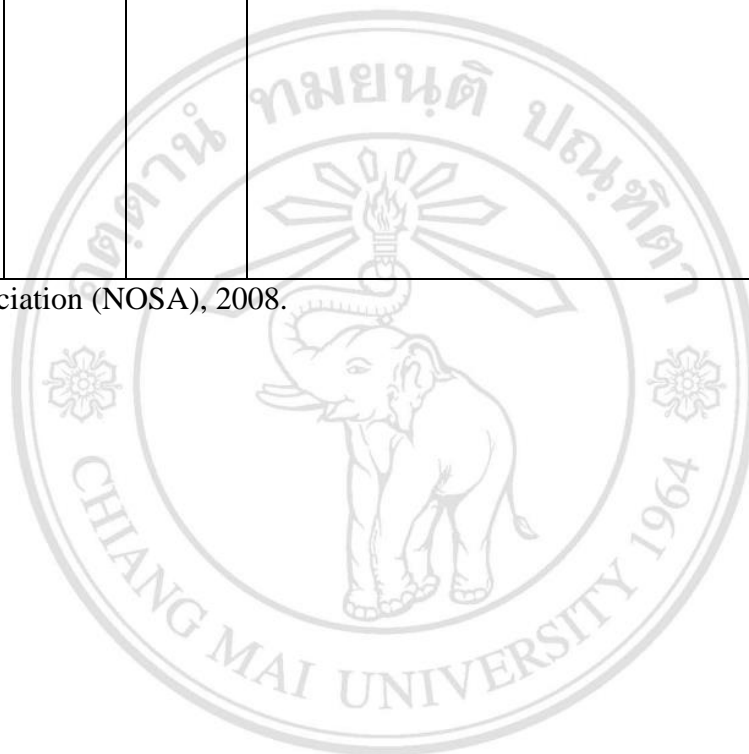


<p>chemical hormones.</p> <ul style="list-style-type: none"> <li>- Do not use machines or equipment that was used in orchard where chemical inputs were applied.</li> </ul>				
<p><b>6. Seed and propagation</b></p> <p><b>6.1 Seed</b></p> <ul style="list-style-type: none"> <li>- Do not use chemically preserved seeds.</li> </ul> <p><b>6.2 Propagation</b></p> <ul style="list-style-type: none"> <li>- Do not use chemical hormones in seed dressing or propagation.</li> <li>- Use only perennial plant branches or reproduction parts of organic garden. Branches from chemically tainted garden can be used if the garden has stopped using chemicals for at least 12 months.</li> <li>- Do not use seeds, branches, perennial plant of genetically modified crops.</li> </ul>				
<p><b>7. Water management</b></p> <p><b>7.1 Prevention of chemical contaminants in water</b></p> <ul style="list-style-type: none"> <li>- Water clarifier is required if a shared water supply is used with orchard where</li> </ul>				

<p>chemical inputs were applied.</p> <ul style="list-style-type: none"> <li>- Rice field requires water clarifier or use buffer garden as a water clarifier.</li> <li>- Waste water treatment system is required.</li> <li>- Do not use sewage treatment residues</li> </ul>				
<p>8. Harvesting and marketing</p> <p>8.1 Harvesting</p> <ul style="list-style-type: none"> <li>- Do not use harvest equipment that was used in chemical garden. In case of necessity, decontamination is needed.</li> <li>- Keep harvested products, containers, and storage clean.</li> </ul> <p>8.2 Storage and curing</p> <ul style="list-style-type: none"> <li>- Do not use shared storage with harvested chemically tainted products</li> <li>- Do not use curing accelerators</li> </ul> <p>8.3 Transportation</p> <ul style="list-style-type: none"> <li>- Do not share equipment and truck with chemical products. In case of necessity, one must prevent contamination.</li> </ul> <p>8.4 Post harvesting</p>				

<p>- Do not use chemicals to extend shelf-life or clean.</p> <p>8.5 Marketing</p> <p>- Label standard mark on the products prominently.</p> <p>- Place organic products separate from chemically tainted products.</p>				
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**Source:** The North Organic Standard Association (NOSA), 2008.



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**C. ADAPTATION ON ORGANIC VEGETABLE FARMING (LIVELIHOOD ASSET)**

Adaptation	Level		
	Much	Fair	Less
<b>1. Human capital</b> 1.1 An area away from the road with a vehicle density 1.2 Specific areas for organic production 1.3 A remote area of space with the use of chemicals 1.4 Labor in organic vegetable production 1.5 farmers' health			
<b>2. Natural capital</b> 2.1 Soil fertility 2.2 Water resources 2.3 Biodiversity 2.4 Organic vegetable area			
<b>3. Social capital</b> 3.1 Farmers' group 3.2 Knowledge sharing between farmers 3.3 Participation in organizations 3.4 Support from the community			
<b>4. Physical capital</b> 4.1 Transportation 4.2 Electricity systems 4.3 Plumbing 4.4 Communication			
<b>5. Financial capital</b> 5.1 Total income 5.2 Amount of saving 5.3 Amount of loans			



## CURRICULUM VITAE

**Author's Name** Miss Nathitakarn Pinthukas

**Date of Birth** 7 September 1984

### **Educational Background**

- Lower secondary school: The Prince's Royal College, Chiang Mai (2000)
- Upper secondary: Sacred Heart College, Chiang Mai (2003)
- Bachelor's degree in Agricultural Extension, Chiang Mai University (2007)
- Master's degree in Agricultural Extension, Chiang Mai University (2009)



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