



Good Afternoon

GROUPS B



Sustainability and Problem Development Organic Farming in Bali and Japan

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Development of Organic Farming

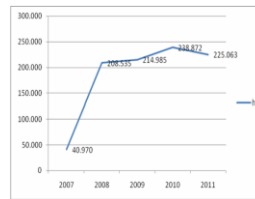


Figure : Development of organic farming total area in Indonesia (ha)

Sources : SPOI 2011

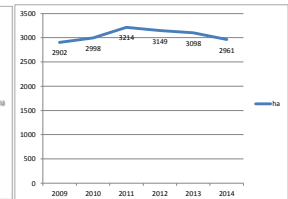


Figure : Development of organic farming total area in Japan (ha)

Sources : Ministry of Agriculture, Forestry and Fisheries http://www.maff.go.jp/j/as/jas_kikaku/nyuuki.html#raiseki (2009-2014)

One experimental challenge 2012



Organic fertilizer production ranch

Here ,they are Breeding 50Male and female Bali cow for organic feed.
 There' s feed is Only flesh grass, it' s safety for us.

Problem of Organic Farming in Indonesia and Japan

No	Indonesia	Japan
1	The land area is narrow and located side by side with non-organic land	The land area is narrow and located side by side with non-organic land
2	Pollution of water sources	Pollution of water sources
3	Location of organic farms far from transportation access	
4	Organic seeds are difficult to obtain	
5	Management of pests and plant diseases use chemical	
6	Using of organic fertilizer is more difficult than using chemical fertilizer.	Using of organic fertilizer is more difficult than using chemical fertilizer.
7	The lack of human resources for the development of organic farming	The lack of human resources for the development of organic farming
8	The difficulty of marketing organic products	
9	The yield of organic farming is smaller than conventional	The yield of organic farming is smaller than conventional

solution to increase organic farming

- In japan
- Farmer use internet to cell
- New entry of companies from other industries
- Cultivate vegetables on commission to restaurant chain
- Make cooperativize
- Produce B-grade articles and remnant

RESULT AND DISCUSSION

The land area is narrow and located side by side with non-organic land



Government must be extended the agricultural land for organic farming

Pollution of water sources



Upland must be applied organic farming first, if upland didn't applied organic farming than the downland applied organic farming it would be contaminated.



The use of water reservoirs

Location of organic farms far from transportation access



- Solution**
- Provide access to transportation as a car to farmers.
 - Construct adequate access roads.
 - Provide education to farmers learning to facilitate the use of internet access to communicate to consumers.

Organic seeds are difficult to obtain



Solution

- To make a seed like a resistant disease strongly or develop some good variety that pest and disease .
- The government must provide organic certification for ease of manufacture and distribution of organic seeds.

Management of pests and plant diseases use chemical

Control of pests and plant diseases must use organic materials and friendly to the environment

Stop used chemical pesticide



Solution :

- Education and Support
 - Agricultural institution should support farmers to save poverty.
 - For example, set criteria and subsidy
 - Local government build screen house or artificial barrier for farmer to reduce pest and disease.
- Research and training
 - To make a seed like a resistant disease strongly or develop some good variety that pest and disease .
 - To make a efficient and effective biopesticide and training the farmer application of the biopesticide and control the pest.
- Market
 - Promoting organic products to farmers as management of pest and plant diseases

Using of organic fertilizer is more difficult than using chemical fertilizer



- Solution :**
- Education and Support
Government should support and develop livestock .
 - Research and training
To develop some good microorganism that can makes the process of composting more fast and effective.
 - Training the farmer how to use organic fertilizer more effective and efficient.

The lack of human resources for the development of organic farming



Solution

- Provide education to farmers how to compost.
- Provide education to farmers how to MOL.
- Provide education to farmers how to compost.
- Government Must me related organic farming program to support sustainable agriculture



The difficulty of marketing organic products



- Solution :**
- Education
University and government relates each other to inform goodness to consumer.
 - Research
Due to make good looking production, government leads investigate and teaches farmers.
 - Market
Information about symbol or logos of organic product so the consumer could differentiate organic product or non organic product

The yield of organic farming is smaller than conventional



- Solution :**
- Education and Support
Government should support farmers to save poverty.
For example, set subsidy
 - Research and training
To develop some good variety to increase the yield.
Training the farmer how to increase the yield .
 - Market
The yield of organic farming may be more lower than conventional farming but it's more valuable and expensive.

Soil analysis

Sample site

1.Subacc buangga rice field

2015.08.20 conventional / organic

2.Beduele vegetables field

2015.08.22 conventional / organic



Methods

Soil nourishment official approval

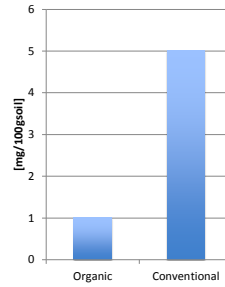
device (Japan bio farm,Nagano,Japan)

Objectives

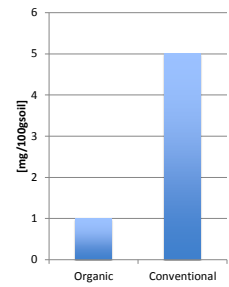
- Already **10 years have passed** for the organic farming which has begun by technical guidance of a UDAYANA university's lab. **in 2007.**
- The soil component which changed by continuation fertilization of the organic fertilizer is compared with ground in a farm of a conventional way to confirm the effect of the ground improvement.
- The organic pest control pill a [UDAYANA university](#) has developed for **5 years**
- The influence to ground by continuation spraying of "[Bali spicy](#)" is confirmed.

Result of analysis rice field

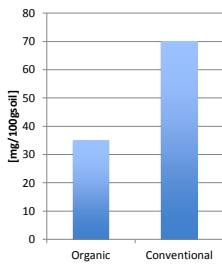
Data analysis NO₃ levels in rice field
(Subacc buangga)



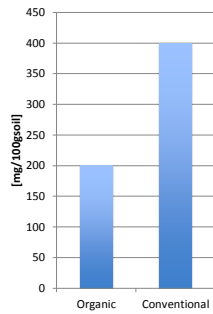
Data analysis NO₃ levels in rice field
(Subacc buangga)



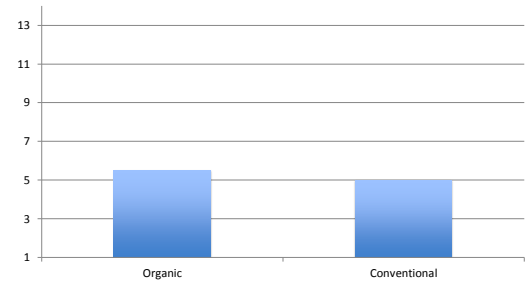
Data analysis K₂O levels in rice field
(Subacc buangga)



Data analysis CaO levels in rice field
(Subacc buangga)

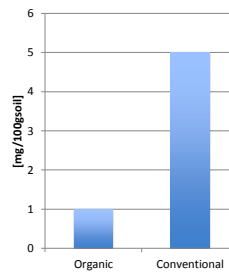


Data analysis pH levels in rice field
(Subacc buangga)

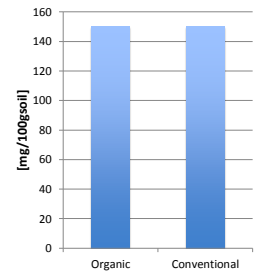


Result of analysis vegetable field

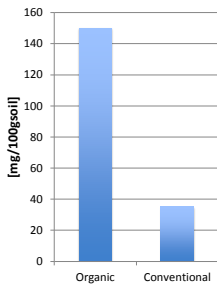
Data analysis NO₃ levels
in vegetables field
(Beduele)



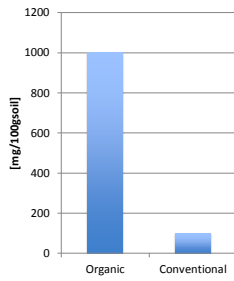
Data analysis P₂O₅ levels
in vegetables field
(Beduele)



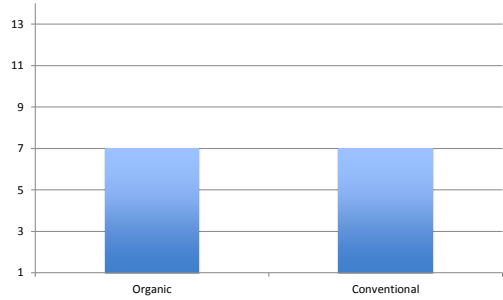
Data analysis K₂O levels in vegetables field (Beduele)



Data analysis CaO levels in vegetables field (Beduele)



Data analysis pH levels in vegetables field (Beduele)



Rice field

Result of Soil Conventional and Organic Observation in Subak Buangga

Parameter of Observation	Organic	Conventional
NO ₃ [mg/100gsoil]	1	5
P ₂ O ₅ [mg/100gsoil]	5	25
K ₂ O [mg/100gsoil]	35	70
CaO [mg/100gsoil]	200	400
Ph [-]	5.5	5

Vegetable field

Result of Soil Conventional and Organic Observation in Bedugul

Parameter of Observation	Organic	Conventional
NO ₃	1	5
P ₂ O ₅	150	150
K ₂ O	150	35
CaO	1000	100
Ph	7	7

CONCLUSION

- Organic farming must be develop and support by university, government and farmer.
- For support organic farming system must be combination and integrate between agricultural, livestock, and fishery.
- All there system and market must be research for develop of new organic products.

Thank You

