

#### ជីធម្មជាតិសហគមន៍កសិកម្មឧត្តមសូរិយា **Natural Fertilizer of Utdomsorya Cooperative**

### **IMPROVE VEGETABLE** PRODUCTION BY USING BOKASHI **FERTILIZER**

**Chhay Sothet** 





**UPSCALE** Upgrading Strategy for Small-Scale Farmers in Cambodia

















### **Chhay Sothet, Program Manager**

### **ADG**

- 17 Years in Cambodia on vegetable vegetable value chain
- Supporting Farmer Organization

















 Importance of Bokashi in vegetable production

1. Why Agricultural Cooperative or Farmer Organization should produce and sell Bokashi?



Fertility is the heart of the agriculture and It is the bottleneck of promoting Agroecology



Natural Fertilizer is very important for vegetable growing





### **COMPOST**

- 4-6 months
- High labor
- Required different amount of inputs
  - Most of farmers don't have habit to produce such compost

### **SAVING COMPOST**

- Easy
- Less effective



- In our case, farmers need generally 15 tons/year of natural fertilizer
- However, farmers could produce only 7-8 tons/year of saving compost

### how do the farmers deal with the problem?

Chemical Fertilizer

Buying natural fertilizer from outside

### What is Bokashi?

Fast compost (Microorganism+Fermentation Technic)



Microorganism



**Preparing inputs** 



Mixing

# Components 60% Animal Manure 25% Trees Waste 10% Earth Soil 5% Vegetables & Fruits Waste





Anaerobic

# In 2015, the program has tested the Bokashi

Results on Long bean	Bokashi	Compost
Duration of production(day)	20	120
Quantity usage (kg/m2)	0.5	1.5
Cost(riel/m2)	500	705
Yield, first harvest(kg/m2)	1.093	1.05



### Market survey and Business Plan



Selecting Production Partner, Otdom Soriya Cooperative









Research and development to improve the quality and reduce production cost



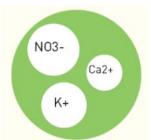
Production facilities, workshop, equipment/materials, transportation

# Advantage of Bokashi over traditional compost



Level of Microorganism

2-3 times higher



Nutrition: Nitrogen, Potassium, Phosphorus and calcium... Enrich with more nutrition because of different selected inputs and proper production method



**Duration of production** 

20 days compared to 120 days



1/3 lower

## Advantage of Bokashi over traditional compost

Fruit, vegetable...

- Better taste
- Bigger leave and fruit
- Bette appearance
- Better resistance(live longer)

# Why FOs should produce and distribute this fertilizer?

- Respond to the needs of members
- Changing habit of ACs/FOs
- Promoting Agroecologoy
- Increasing efficiency of local inputs used in natural fertilizer
- Collective Commercialization + Improve access to market of local inputs

# Thanks!

