Case study of Ms Sourt Sear's vegetable garden

Updated in Jan. 2019, Battambang, Cambodia

Ms Sourt Sear is a 54-year-old women farmer, who lives in Sreah Keo Village, Kompong Phreas Commune, Sangker district, Battambang province. She is a widow and a head of household with 9 members of her family.

Ms Sourt's farming background

Nowadays, Mrs Sourt grow 2 acres of rice-field and raises five cattle. In addition, Mrs. Sourt is growing free-chemical vegetable crops in small-scale garden with a total area of 88 m² of cultivated land, with 16 m² on the growing table, 54m² on permanent raised bed and, 18m² of field-grown crops.

Ms Sourt is watering cabbage on table

She takes 2 to 3 hours a day to grow vegetables crops, such as cabbage, celery, garlic, salad, peanut, better melon, cucumber, long bean, marigold, bok choy, chili and lemongrass, intercropped with bananas, papayas and orange trees. These vegetables are mainly cash crops and also feeds for the whole family. Ms. Sourt said that outside working hours in the rice field, she also collects a lot natural material, such as straw and grass especially for livestock and also for composting. She prepares a lot of compost and stock it for her upcoming crops.

She thinks that small-scale vegetable farming is profitable and easy to maintain because it is near water and nearby, which can prevent the pest's damage on time.

She spent small budget on the purchase of inputs to implement a vegetable garden by using the potential of natural resources near her house, which can be recycled in the crop field, such as bamboo and tree branches to make growing tables for example. Regarding some seeds she bought on his own and some organizations provided.

Ms Sourt's growing practices

For growing techniques, she fully chose agroecological practices.

Soil Preparation on field-ground: She digs and dries the soil for about a week, then puts about 10 kg of compost per square meter. After that, she can sometimes cover with a mulch.

Make compost: She uses raw materials such as water hyacinths, fresh leaves, cow manure and straw. First, she lays the first layer of straw, she places a next layer of green plants and over, a thin layer of manure. She repeats the same 3 layers, up to 1 meter in height. And she keeps it for a month and a half, then turns it over once, and then keeps it until the heat diminishes, and it's become a brown soil close to humus, she says the compost can be used.

Ms Sourt makes compost pile

Ms Sourt's decomposed compost

Soil Preparation on table: She collects topsoil under the trees and mixes it with compost, then, scrapes the soil before sowing or transplanting the new crops to tables.

Maintain fertile soil: She always adds 2kg/m^2 of compost before growing each new crop cycle.

Growing on tables: After harvesting each crop cycle, she adds compost and humus too, and she works on, so that the soil does not stick to hardwoods and water rotten roots.

Fertilizers use: She make liquid compost and watering it 1L/m^2 every day.

Watering: Regarding crop just transplanted, she is watering 2 time by day, than, when the roots grow well, and he reduces the amount of water that is consumed only once a day, in the evening. For newly transplanted crops, she watered 3 time a day, and when the plant is well rooted, she reduces the water amount of water consumed by watering once a day, in the evening.

Crop Protection: She keeps track of her vegetable every day, and when she sees that her vegetables are destroyed, she makes natural pesticides such as neem leaves with chili, papaya, peppermint, holy basil, etc.

Ms Sourt's celery crop on table, Nov. 2018

Ms Sourt's cabbage crop on table, July 2018

Ms Sourt's economic analysis

1. Mean costs for 88m3 of cropland per month (findings calculate from data collected during 6 months from April to November 2018)

N	Type	Quantity per month	Unit Cost	Total Cost
1	Soil preparation	5 days	0	0
2	Compost making	3 days	0	0
3	Hand weeding	2 days	0	0
4	Vegetable seeds	8 bags	2000R	16 000R
5	Garlic cutting	1 kg	7000R	7 000R
6	Equipment	3 tools/year	(15000R/12 month)	12 500R
TOTAL				**35 500R**

2. Mean income for 88m3 of cropland per month (findings calculate from data collected during 6 months from April to November 2018)

N	Crops	Number	Unit Cost	Total Cost
1	Salad	12 kg	3000 R	36000 R
2	Water convolvulus	10 kg	1500 R	15000 R

3	Peanut	9 kg	4000 R	3600 R
4	Choy Sum	15 kg	2500 R	37500 R
5	Cabbage Curly	7 kg	2500 R	17500 R
6	Bitter melon	5 kg	2000 R	10000 R
7	Leaf Celery	14 kg	7000 R	98000 R
8	Garlic	2 kg	8000 R	16000 R
TOTAL				**266000 R**

Ms Sourt grows salad under eggplant, Oct. 2018

Ms Sourt's salad and garlic, Oct. 2018

Results obtained

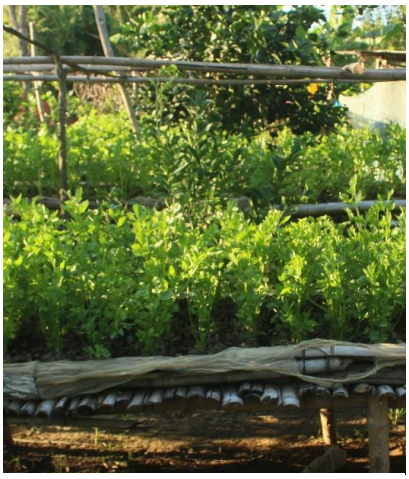
During a six-month cultivation period in the wet season, we can conclude that she has a good result because she is spending a fair amount of money on her own. On average, during one month, she can get 266,000 R, he spent 35,500 R, he still has 230,500 Riel. What the important things is her family can eat organic vegetables and spend money to buy vegetables from the other, It can help to reduce the expenses of her family.

Project background

Minh Sear who is Conventional start on 2008 but she make like small holder farmer for food only while pest management and management is he uses agricultural pesticides when there is a small crop on the crop. However, when he attended several agricultural life and farm training courses in his village and attended a study tour in Siem Reap from Ming Thai Soda's vegetable and Sai Ray, a pilot farmer of NGO GRET and CIRD under the APICI project.

This APICI project focuses on agroecology. What she gained from this trip was that she modified his vegetable cultivation from organic vegetables to vegetable sauce, then she

reorganized his vegetable garden as a high shelf from the ground and from Under the vegetable shelf, she can grow another type of crop that needs less sunlight. Its benefits are easy to manage and grow many kinds of vegetables and can be grown both in dry season and in rainy season. And more importantly, she shares the knowledge she has received to promote to her villagers. After the villagers gained knowledge about the methods of cultivating agroecology and saw the successful implementation of aunt, they are more interested in this method of cultivation. We have observed that some villagers have never cultivated and some are grown using chemical substances to cultivate agroecology.



Celery Leaf, Oct. 2018

Salad and Chili, Nov. 2018

Cabbage, Oct. 2018

Ms Sourt makes botanical pesticide from Neem leaf and chili pepper, April 2018