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CASE STUDY

EFFECT OF ECO OK
ON ST25 RICE IN CA MAU
IN WINTER-SPRING HARVEST SEASON - 2022

DASHBOARD

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FIELD INFORMATION

- Farmer: Ta Manh Kha
- Site: Hamlet 5B, Khanh Binh Tay Commune, Tran Van Thoi District, Ca Mau Province
- Sowing date: Nov 22nd, 2021, Harvest date: Jan 30th, 2022.
- Area: 12,000 m²
- Control: Surrounding fields
- Amount of ECO OK fertilizer used: 1 L/ha

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OBJECTIVES

Evaluate	Evaluate	Evaluate
Evaluate the effects of ECO OK on the growth and development of rice plants.	Evaluate the effects of ECO OK on Rice pests and diseases.	Evaluate Economic efficiency.

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APPLICATION PROCEDURE

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TEST RESULTS

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CONCLUSION

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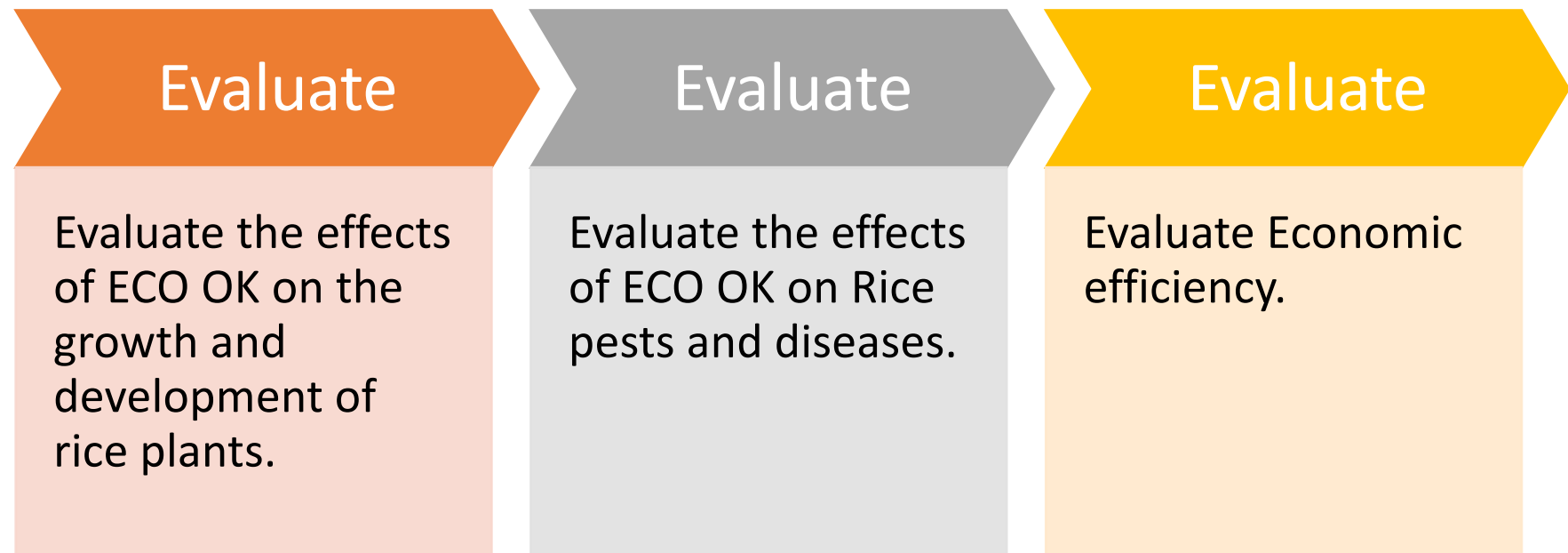
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OBJECTIVES



APPLICATION PROCEDURE



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APPLICATION PROCEDURE

- Soil preparation & treatment before sowing, then apply fertilizers.
- ECO OK is applied together with other fertilizers.



Fertilizer formula with ECO OK

No	Stage	Rate
1	Before sowing	Soak rice grain with a solution of 20 ml ECO OK + 25 liters of water for 60 kg of grain
2	14 DAS Transplanting & tillering	Spray a solution of 20 ml ECO OK + 25 liters of water for 1.296 m ²
3	28 DAS Nourish stems	Spray a solution of 20 ml ECO OK + 25 liters of water for 1.296 m ²
4	55 DAS Panicle initiation to flowering	Spray a solution of 20 ml ECO OK + 25 liters of water for 1.296 m ²
5	66 DAS Flowering	Spray a solution of 20 ml ECO OK + 25 liters of water for 1.296 m ²

(*) DAS: days after sowing

Fertilizer formula

for 1.296 m² (1 công tầm cấy) of both rice fields

No	Stage	Process
1	Before sowing	Fertilise Soil with 25 kg phosphate fertilizers
2	10 days after sowing (DAS)	Nourish the roots 2 kg Humid + 5 kg phosphate & nito fertilizer
3	15-17 DAS	Transplanting & tillering 12 kg Camau Urea
4	30 DAS	Nourish stems 15 Kg NPK fertilizers 19:19:19
5	55 DAS	Panicle initiation to flowering 15 Kg NPK fertilizers 19:19:19

(*) DAS: days after sowing

TEST RESULTS



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TEST RESULTS

1. Effect of ECO OK on growth and development of rice



Germination development

For fields with ECO OK treatment, the sprouts are higher but thinner because the plants are much taller.

The green color is lighter because ECO OK balances nutrition and hardens the seedling.



The vitality of young plants

For fields with ECO OK treatment, there is better vigor and higher germination rate.

TEST RESULTS

Root development

- Using Humic Acid and Urea fertilizers helped the roots to thrive.
- With ECO OK, the roots absorb more nutrients, and the metabolism of plants is enhanced.
- Longer and deeper roots, and better nutrition.

Shooting & tillering

- Faster transplanting & tillering.

Nourish effective branches

- Balanced nutrition so the stems are much more uniform.



TEST RESULTS

Features of rice plants treated with ECO
OK:

- ✓ hardy rice plants,
- ✓ thick leaves and bloom evenly,
- ✓ rice ripens earlier and more evenly,
- ✓ shiny grain,
- ✓ less flattened grain,
- ✓ high productivity,
- ✓ shorten the cultivation time by about 2-3 days.

TEST RESULTS

2. Effect of ECO OK on growth and development of rice

- **Pest prevention**

- ✓ Plants grow well with good resistance to pests and diseases.
- ✓ Rice plants grew well and were resistant to pests, although rice brown spot & blast diseases caused by Bacteria appeared at the rate of 20-30%.
- ✓ Brown Spot & Blast: Treated with chemical pesticide Til Super as usual, but the amount was reduced by 50% and replaced by ECO OK.
- ✓ This imparts high economic efficiency and limits environmental pollution caused by chemicals.

TEST RESULTS

3. Economic efficiencies

No	Content	ECO OK Field		Control Field	
1	Productivity (ton/ha)	9.1	Increase 3.4 (60 %)	5.7	
2	Rice price (VND/kg)	7,000		7,000	
3	Total Income (VND)		63,700,000		39,990,000
4	Total Cost (VND)		11,670,000		14,906,000
5	Profit (VND)		52,030,000		24,994,000
6	Deviant (VND)	27,036,000 (increase 108 %)			
7	Cost for 1 kg of rice	1,282		2,615	
8	Profit for 1 kg of rice	5,718		4,385	

* for 1 ha = 7 large “Cong”.

CONCLUSION



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CONCLUSION

- For fields with ECO OK treatment, rice plants are observed to have well-developed sprouts and seedlings, high number of young roots, early & concentrated tillering process, hard rice plants with thick leaves, uniform flowering, fast rice production, glossy seeds, less flattened grain, high yield and shortened cultivation time compared to the control field by 3 days.
- Rice grain is clear, even and its quality is well appreciated. Such rice quality can fetch better prices in the market.
- For fields treated with ECO OK, there is the ability to combine with traditional chemicals to reduce Brown Spot and Blast diseases. The incidence of leaf blast was lower than that of the control at 28-30 days after sowing.
- Fields using ECO OK compared favourably to surrounding fields due to:
 - ✓ Yield is increased by **3.4** ton/ha or **60%**
 - ✓ Profit is increased by **27,036,00** VND/ha or **108%**.

CONCLUSION

- No Impact is observed. ECO OK products made from Silica rice husks are safe to human being & environment.
- Farming is convenient, easy to apply and can expand to large scale of application.
- Significantly reduce lodging of plants, especially near harvest time.
- Rice ripens evenly and could be harvested 2-5 days earlier.

