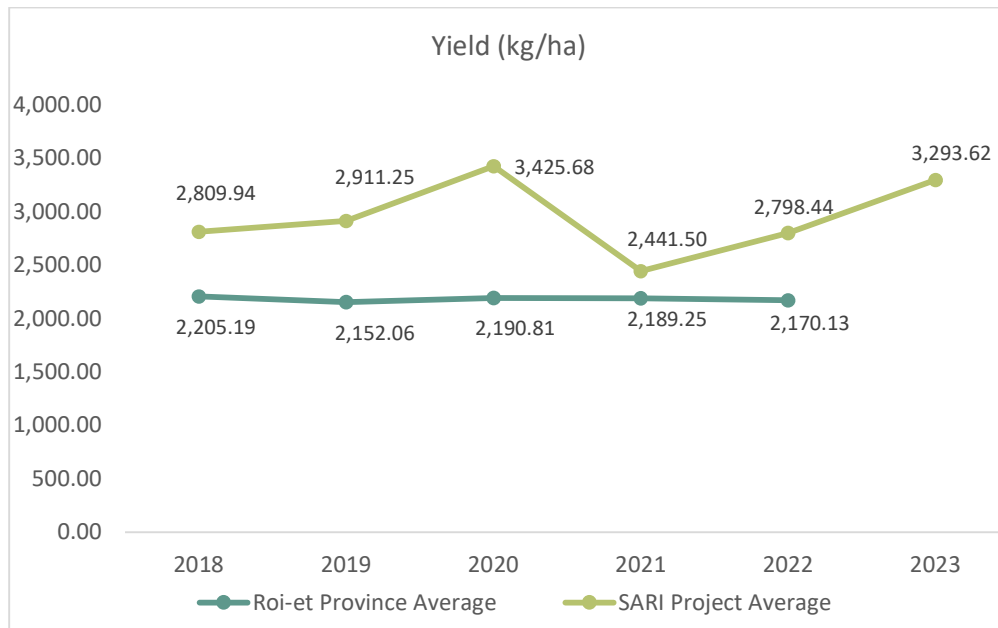




Data Analysis of yield, production cost, revenue and net income of SARI project compared to provincial average

The higher average yield of the project compared to the provincial average demonstrates the overall success of the project



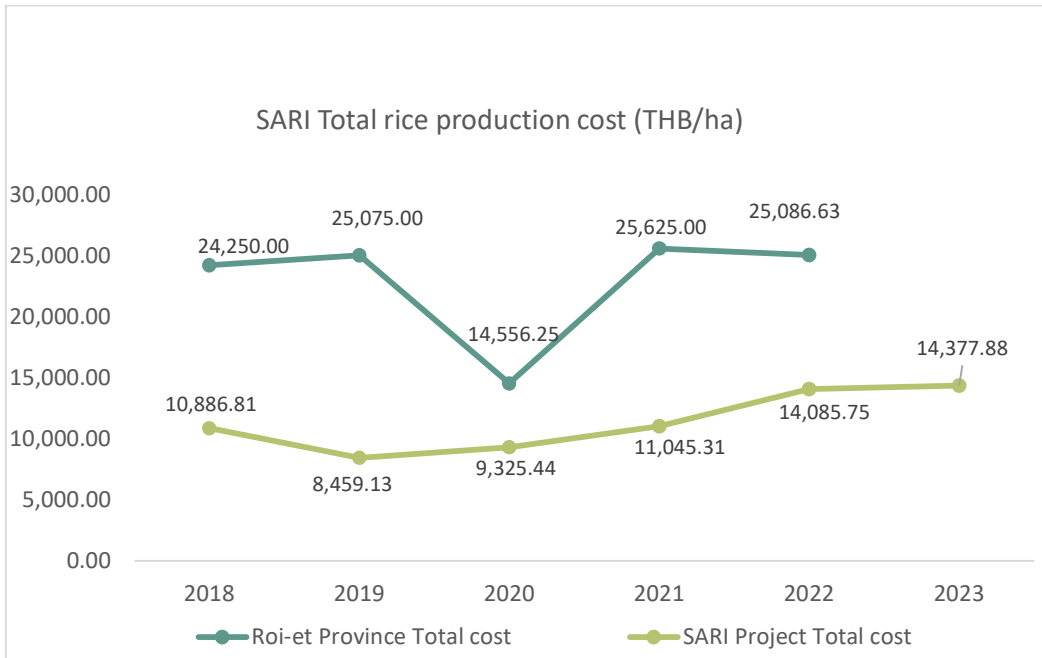
	Roi-et Province Average	SARI Project Average
2018	2,205.19	2,809.94
2019	2,152.06	2,911.25
2020	2,190.81	3,425.68
2021	2,189.25	2,441.50
2022	2,170.13	2,798.44
2023		3,293.62

The graph shows that the **average yield of the project is higher than the provincial average** each year. The massive yield drop in 2021 was a result of both the Rice Blast Disease and the lockdown imposed in the region, as farmers were at home most of the time and rarely went to check their farms. This change in behavior caused by the pandemic led to a lack of pest control and farm management, which had a direct impact on the level of yields during the lockdown period. Despite a massive drop in 2021, the average project yield increased continuously in the following years to **2,700-3,300 kg per ha**, while the provincial average remains at **2,170-2,180 kg per ha**.

The higher average yield of the project compared to the provincial average highlights the **impact of the training courses in various topics and study visits**, which imparted knowledge from harvest preparation to the post-harvest process.

The most important training topics that played a decisive role in increasing yields are **soil nutrition and understanding regeneration**. The project promoted the use of organic fertilizers and manure to nourish the soil. In addition, the project supports effective pest control according to IPM principles to prevent pests and rice diseases from becoming a threat to farmers' harvests. **Growing rice in high-quality, well-prepared soil and pest-free crops leads directly to an increase in yield.**

SARI farmers spend 48% less than the average farmer in Roi-Et province.



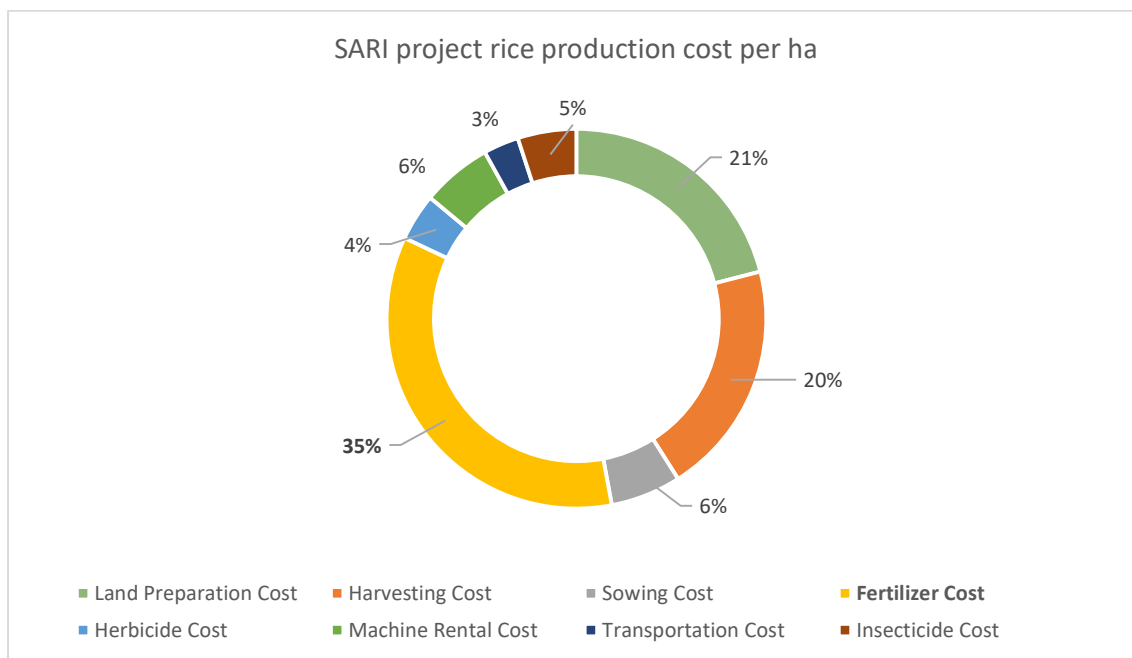
	Roi-et Province Total cost	SARI Project Total cost
2018	24,250.00	10,886.81
2019	25,075.00	8,459.13
2020	14,556.25	9,325.44
2021	25,625.00	11,045.31
2022	25,086.63	14,085.75
2023		14,377.88

The **production costs for project rice fell significantly** in the first year of project implementation, from THB **10,886.81 per ha in 2018 to THB 8,459.13 per ha**.

After the Covid-19 crisis, the cost of fertilizer and tractor fuel increased, resulting in a rise in the total cost of rice production from 2020 to 2023.

However, the average project rice production cost is 48% lower than the average rice production cost of Roi-et Province.

The main factor that significantly reduces the production costs for rice farmers under SARI are lower fertilizer costs.

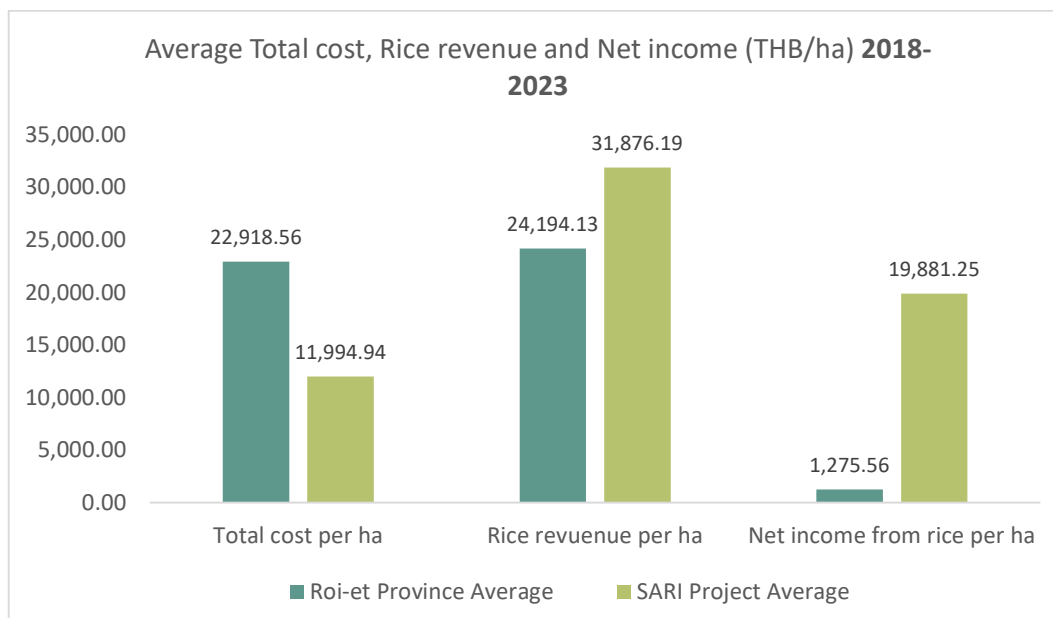


The trainings organized as part of the project promoted a better understanding of fertilizer application, soil nourishment and regeneration with the aim of improving soil quality and nutrient content. Applying fertilizers in appropriate quantities and at the right time helps to reduce the cost of fertilizers. In addition, high soil quality reduces the need for fertilizer for the next harvest.

Since the highest cost of rice production in the project area is the cost of fertilizer, the farmers were able to significantly reduce their production costs compared to the provincial average.

The project also promoted the direct sowing of seeds, which reduced seed costs by 73% per ha compared to the baseline.

Project farmers have less rice production costs but earn more than the provincial net income average, overall improving farmer livelihoods.



The graph compares the average cost, rice revenue and net income (THB/Ha) from 2018 to 2023 between Roi-et province and the SARI project area and shows that project farmers have **48% lower rice production costs and therefore earn 1459% more** than the average net income in the province.

As farmers have gained the ability and knowledge to reduce their expenses, they are able to increase their income and sustainably improve their well-being.

SRP Farmers			Non-SRP Farmers	
	Practice	Impact	Practice	Impact
Burning Stubble	No stubble burning	Soil nutrients remain, soil readiness for the next rice crop	Stubble burning	Soil nutrients are lost; need for more fertilizer in the next crop, which leads to higher fertilizer costs
Fertilizer Application	Application of appropriate quantity & at the right time Application of organic fertilizer and manure	Fertilizer cost savings Soil organic matter (SOM) increase, soil quality improvement, fertilizer cost reduction, yield increase	Application of an excessive quantity of fertilizer Application of chemical fertilizer only, no organic fertilizer	Excessive expenditure on fertilizers Excessive expenditure on fertilizers, overuse of chemical fertilizers ruins the soil
Pest Management	Application of IPM principles	Farmers health & safety, pest control cost reduction	Application of an excessive amount of pesticides	Excessive direct contact with chemicals, excessive expenditure on pest control
Seeding Methods	Direct seeding technique	Seed amount reduction used per crop, seed cost reduction	Broadcast seeding technique	Excessive seeding costs
Rice Production Planning & Management Skills	Planning & management mindset continuously monitoring crops and collecting data	Farmers are able to manage farming practices for each crop in time & are able to control the budget	Traditional way of rice production remains; farmers believe in intuitive farming way without planning	Farmers loose track of their crop situation; challenges are difficult to manage during crops
Farmers Aggregation	Farmers are organized in groups	Farmers are able to share knowledge and experiences in rice production among their group and solve challenges together with their group members	Individual farmers	Individual farmers are not able to learn from other farmers' experiences and aim to solve challenges on their own