

# Beyond the Green Revolution

## Thailand's Attempt to Guide Path Dependent Farmers Towards More Sustainable Practices

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### Problem statement and Objectives

In the wake of the **Green Revolution in the 1960'**, technology deployment and land intensification were introduced in the agricultural sector to trigger the development of Thailand's economy. However, the **excessive use of agrochemicals** led the Royal Thai Government to implement capacity-building programs for farmers to minimize chemical input.

The objective of this study is to understand the rationale behind farming practices in the village of Ban Ba Yai, where farmers remain applying agrochemicals on their fields despite such **government programs**.



Farmer applying herbicide



Study site area

### Methodology and Study site

To approach our objective, we draw on our **interdisciplinary** pool of knowledge and triangulate primary data gathered during a field trip in March 2018. We combined both **natural and social science methods** such as soil and water sampling, questionnaire collection, GPS mapping, semi-structured interviews and participatory rural appraisal tools. We organized our findings around rational household decision-making level, drawing on ideas of **institutional theories and the agricultural treadmill**.

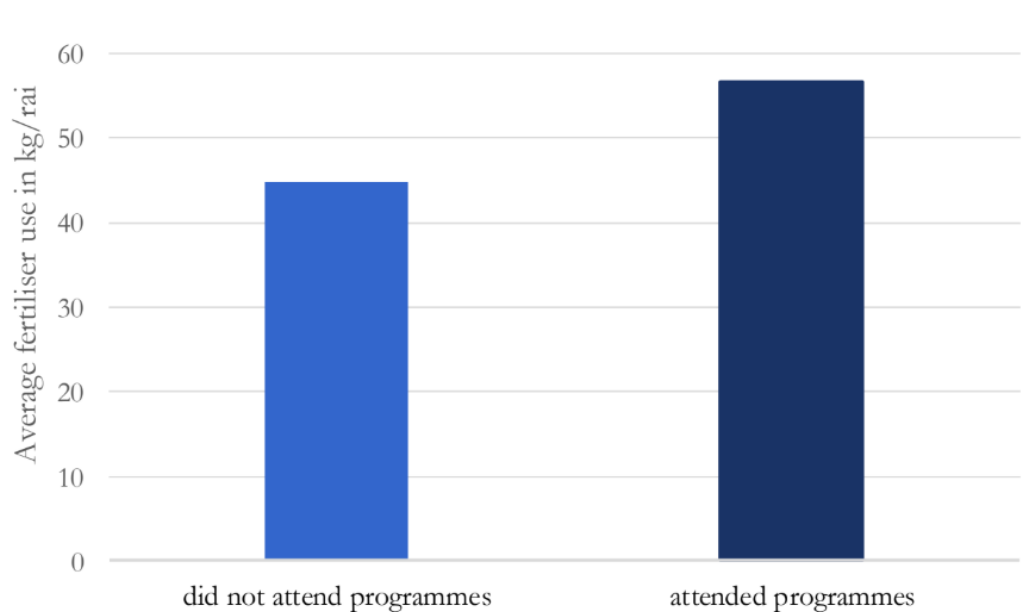
Our study takes place in the village of **Ban Ba Yai in northeast of Thailand**. There are 268 households and most of them derive their main income from agriculture (i.e. rice, sugar cane, cassava, and corn).

### Results

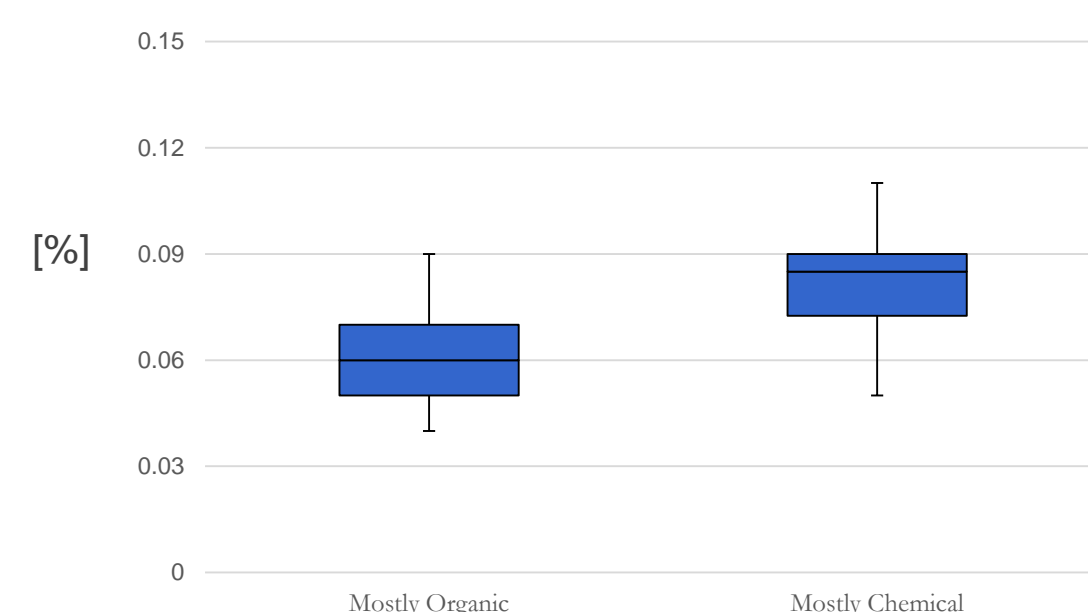
Our results suggest that **poor soil conditions** and **lacking market structures** create a path dependency impeding an effective shift towards sustainable farming practices. The introduction of new technologies and consequently low commodity prices created a treadmill that challenges farmers to change practices.

Moreover, we identified **different agencies among villagers** that have access to better networks, knowledge or financial means. For the average farmer, it seems difficult to detach input decisions from the market requirements.

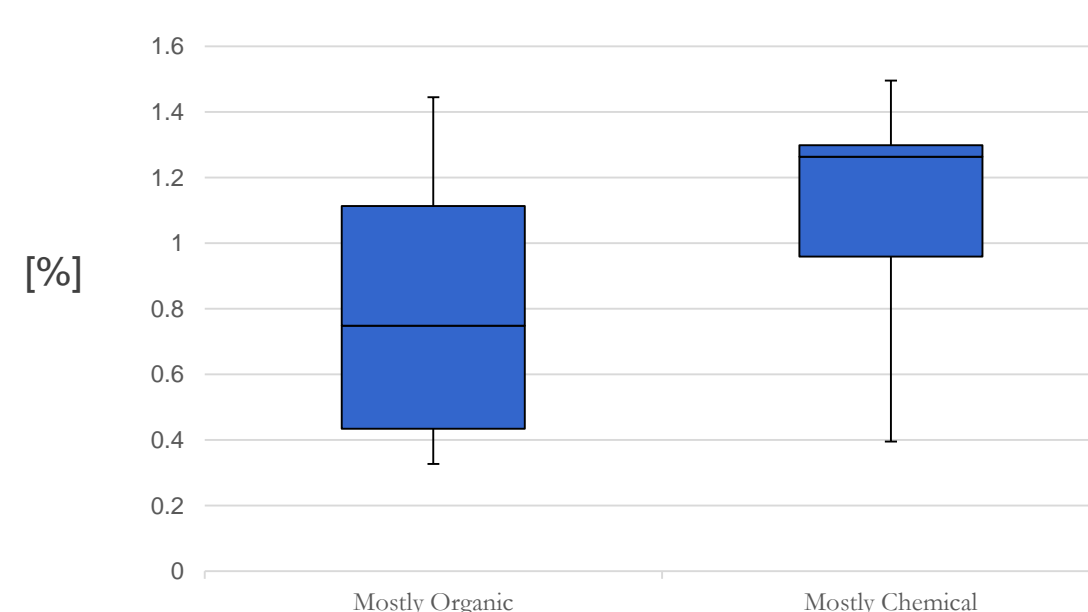
Adding to this, we identified that farmers' **perceptions on sustainable agriculture practices conflict with the government programs** as they do not fit with their reality.



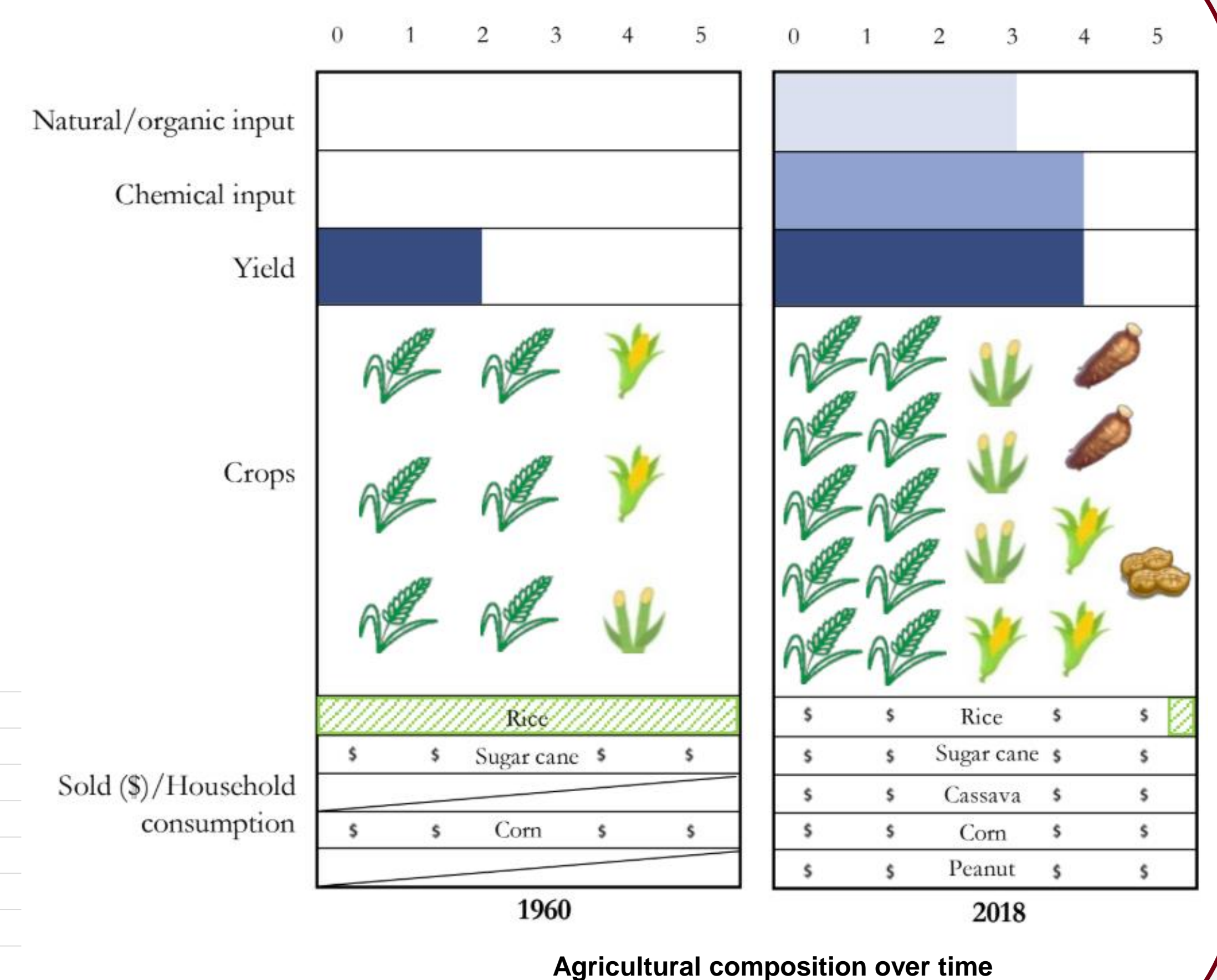
Fertilizer use in terms of program attendance



Soil analysis: Total Nitrogen



Soil analysis: Soil Organic Matter



Agricultural composition over time



Rice harvest in Ban Ba Yai

### Conclusions

Overall, our study shows a **gap between authorities and local farmers** which results in government programs having little effect in creating change. Furthermore, it suggests that a shift towards sustainable farming practices can only be achieved through **connecting the capacity building approach with financial incentives**. Farmers seem to consider alternative practices only, if they gain an economic benefit from it.

Our evidence based results may contribute to future policy design and enable more effective government programs. However, further research on laws and regulatory landscapes in Thailand to facilitate programs adoption is recommended.