

Special Section: Agrarian transformation in Thailand - commodities, landscapes, and livelihoods
Review Article

Introduction to the special section: Agrarian transformation in Thailand - Commodities, landscapes, and livelihoods

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Abstract: This is an introduction and review for a special section on agrarian transformation in Thailand. The article seeks to guide greater attention toward issues affecting rural Thai landscapes and livelihoods. Through the examination of specific commodities across various geographies, the paper seeks to refocus research towards decision making processes among rural communities. The research draws on field study cases that follow various aspects of particular commodities, including rubber, pomelo, tomato, cassava, and furthermore, incorporates complementary research in *Forest and Society* on coffee, ginger, jujube, and agrotourism in Thailand. Through the factors shaping engagement with these agricultural commodities, we examine issues including labor, soil fertility, contract farming arrangements, drought resistant crops, climate change, and others. In this way we seek to draw attention to the complex dynamics taking place on the Thai rural landscape and the factors that are reshaping land relations. Through initiating a research network on similar research approaches we identify and envision broader opportunities for helping to re-imagine future possibility in rural Thailand.

Keywords: Agrarian transformation; commodities; landscape; agrarian change; livelihood; Thailand

1. Introduction

Over the last two decades, there have been extensive discussions about the priorities and processes of agrarian and rural transformation in Thailand. The production and value systems surrounding agricultural transformation involves the overall restructuring of a subsistence-oriented economy to a market-oriented one. Agricultural households are increasingly prioritizing and becoming more dependent on intensive and specialized production of cash crops. Rural livelihoods are also relying more on off-farm income generated by local urban centers or remittances sent back from migrant workers. Although outmigration and the remittance economy has supported rural households, there are also other consequences, most evident in the scarcity and changing labor practices in agricultural sectors.

This transformation is affecting rural society in perplexing ways, both with perceived positive and negative impacts. On the one hand, Thailand has seen a decline in poverty rates, improving access to education, and other development indicators (Office of The National Economic and Social Development Board, 2016). But on the other hand, there are growing indicators of increasing economic differentiation, the perceived withering of community solidarity, and certain people left behind through these changes. These trends of agrarian transformation are reshaping broader developments in Thai society, taking place alongside dynamics of increasing population, urbanization, new approaches to rural policy interventions, natural resource limitations, and changing societal values. In short, what will become of rural Thailand?

This special section attempts to provide a picture of transformation by examining the changes taking place across rural communities in Thailand. We begin through the lens of agricultural

commodities, which are increasingly shaping much of life in rural Thailand. We believe that explaining the multiple sources and effects of certain commodities in particular locations in Thailand provides distinct explanatory potential. For example, rubber, a crop originally grown in the South of Thailand has been widely introduced in the northeast region for the past 30 years, affecting local community dynamics, creating new projects, changing cultivation practices, and initiating new ways of interacting with the state and international markets. Farmers are facing new choices between planting staple crops and cash crops, or to seek out labor opportunities elsewhere by migrating long term or seasonally to find work in other sectors. In this special section we also follow example of other commodities. Other surprising examples include agricultural commodities (Fisher et al., 2017) geared to supporting a vision of agrotourism (Choenkwan and Fisher, forthcoming), illicit agricultural production of poppies in upland and border areas (Anderson, 2017; Anderson and Jongruek, 2017), ginger production in forest lands (Choenkwan, 2017) new boutique crops like arabica coffee and jujube, and a multitude of other trends.

Agrarian transformation provides perplexing, contradictory, and paradoxical effects, which can at once empower and dispossess. The papers herein describe a series of commodities and their role in agrarian transformation. These include rubber (Tongkaemkaew et al., 2018), cassava (Polthane, 2018), tomato (Gedgaew et al., 2018), and pomelo (Duangta et al., 2018). We also engaged with some other preliminary research on aging farmers and youth perspectives that are complex areas of research still being developed for future publication. We recognize that the breadth of the topic of agrarian transformations in Thailand requires sustained engagement and hope that some of the findings in this special section can continue to provide answers to these timely questions.

In this introductory piece we begin with a broader picture of agrarian transformation in Thailand, focusing on the macro level trends of agricultural and development. In the subsequent section we lay out some broad summaries of the papers in the special section and highlight some preliminary findings based on this research. We conclude by laying out areas of future research that sustains engagement on the topic of agrarian transformation in Thailand.

2. Trends of agricultural development in Thailand

The agricultural sector in Thailand has long been described as the “backbone” of development. Agriculture used to be the most important sector in the Thai economy. Before manufacturing and the service sector began to play an increasing role in the Thai economy in the late 1970s, the agricultural sector generated almost all of the country’s export income (Singhapreecha, 2014). The share of agricultural-related GDP has since decreased substantially and continuously. In 2010 agricultural products accounted for about 11% of GDP and decreased to 9% in 2017 (The world bank, 2017). However, the agricultural sector still continues to play a central role in the Thai economy for both labor and livelihood. Although there has been an expansion of industrial scale agriculture, the sector is still dominated by smallholders. As of 2016, there are about 6.8 million farm households or about 17 million people (about 25% of total population) that still earn their living from agriculture (National Statistical Office, 2016). Therefore, the agricultural sector shapes the lives of most of the rural landscape in Thailand.

Agrarian transformation is continuing to take place in new ways, indelibly affecting a large percentage of the Thai population. Farmers are especially experiencing change in the ways they engage with agriculture, shifting a larger part of their cultivation strategies from subsistence activities to market oriented ones. The introduction of agricultural technologies, new machinery, and inputs, have played an increasing role in transforming agriculture in Thailand over the past thirty years. Rambo (2017) for example, describes that buffaloes were the main power for plowing in the Northeastern region of Thailand until the 1980s, which were subsequently replaced by two-wheel hand tillers. In 1983, there were only a few thousand hand tillers in use in the Northeast, but by 2003 they numbered 1.25 million, which are now being phased out in favor of four-wheel tractors.

Moreover, in the 1990s, combined harvest equipment began to replace hand harvests. In 1993 only 1% of households used these machines, but by 2003 they were employed by 14% of farm households (Grandstaff et al., 2008).

Wongsaichue (2010) has also shown that agricultural land holding sizes are decreasing. In the early 1980s, the average household smallholder plot size was about 35 rai¹ (Hays, 2014). In 2006, the average land holding reduced to about 23 rai, and in 2016, approximately 17 rai (Information and Communication Technology Center, 2016). The National Statistical Office (2016) records show that of the total of about 321 million rai (51.4 million hectares) of Thailand’s total land area, one third is cultivable as crop land. However, the National Statistical Office (2016) also shows that agricultural land areas has slightly decreased since 2007. There were about 150,615,116 rai in 2007, which by 2016 had decreased to 149,260,157 rai (see Figure 1).

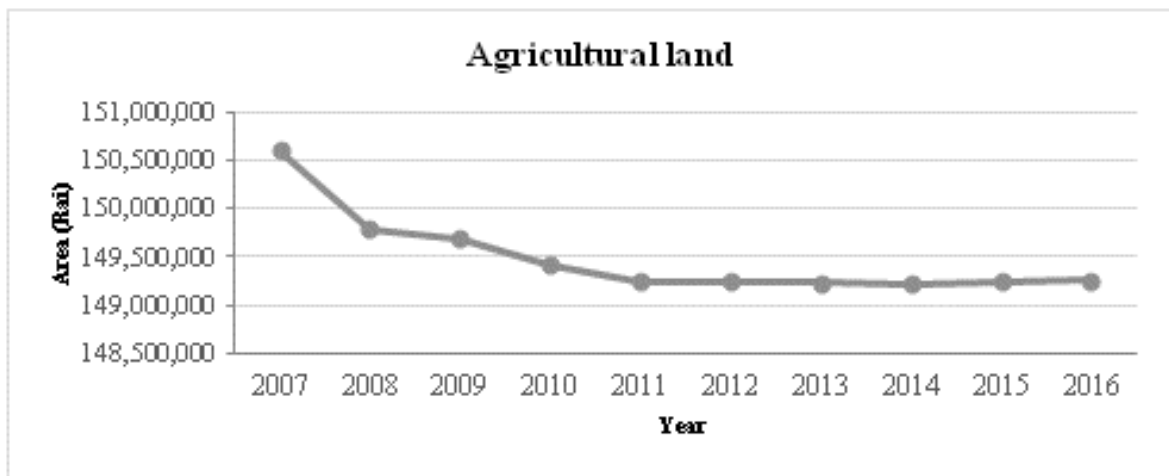


Figure 1. Statistics of land utilization under agricultural land during 2007-2016

In this regard, about 70 million rai or 47% accounts for paddy area, 31 million rai (21%) are for field crops such as sugar cane, cassava and maize, and 23 million rai (15%) account for fruit trees and tree crops (especially rubber), and about 1 million rai (0.7%) is for vegetables and ornamental plants (National Statistical Office, 2016). However, figure 2 provides a more detailed description within each of these categories. Rice land and field crops have experienced a sharp decline, and as detailed in figures 2-4, the sharp increases in tree crop area cultivation is the direct impetus for these changes.

Agrotourism is also increasingly recognized as a new form of agriculture in Thailand. The tourism industry creates a large amount of income in Thailand and it plays a central role for the Thai economy. Turner and Freiermuth (2017) estimates tourism receipts showing that the sector had a total contributes to 20.6% of GDP in 2016 (USD 82.5 billion). The statistic also shows that tourism directly supported 2,313,500 jobs (6.1% of total employment). Agrotourism is a type of tourism that integrates farmer’s lives and agricultural activities as part of the tourism destination. Tourism thus is envisioned to support agriculture and farmers by creating new markets, especially in possibilities from the sale of agricultural products. Farmers could thus sell products to tourists directly with higher prices than those negotiated with middlemen. Agrotourism allows tourists to gain the knowledge of agriculture, experience agricultural activities and appreciate the unique agricultural and rural landscape. Agrotourism is promoted officially throughout Thailand in 1999 in as a strategy

¹ 1 rai = 016 hectare

for rural development. Agrotourism is expected to help to generate additional income for farmers, provide new occupations for unemployed people, and enhance local rural economies (Srisomyon, 2010). The government launched an agrotourism project with funding of approximately US\$ 4 million to develop and promote agrotourism destinations in several parts of the country (Srisomyon, 2010). In 2012, more than 400 villages were officially promoted as agrotourism destinations (Na Songkhla and Somboonsuk, 2012). However, no official records of numbers from agrotourism are available. Presently, agrotourism has vastly been expanded throughout the country in both forms of community-based tourism and in partnership with the private sector.

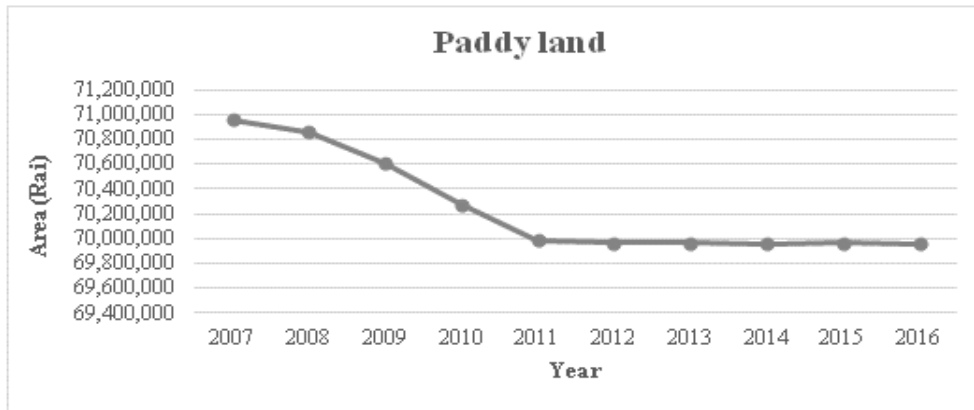


Figure 2. Statistic of land utilization under paddy land during 2007-2016

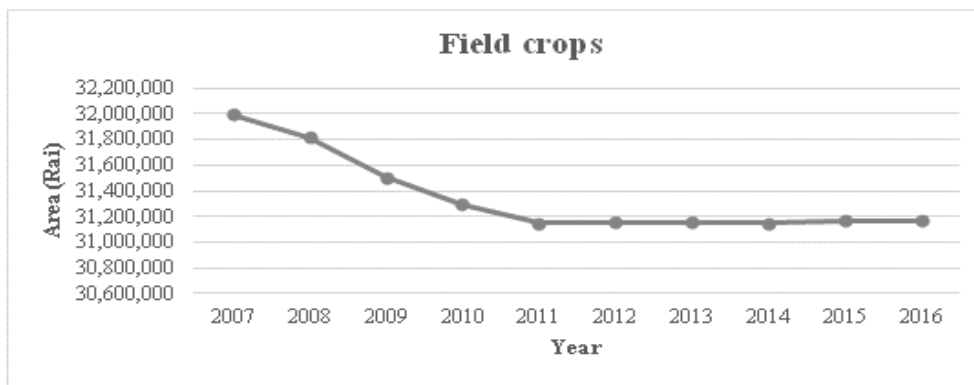


Figure 3. Statistic of land utilization under field crops during 2007-2016

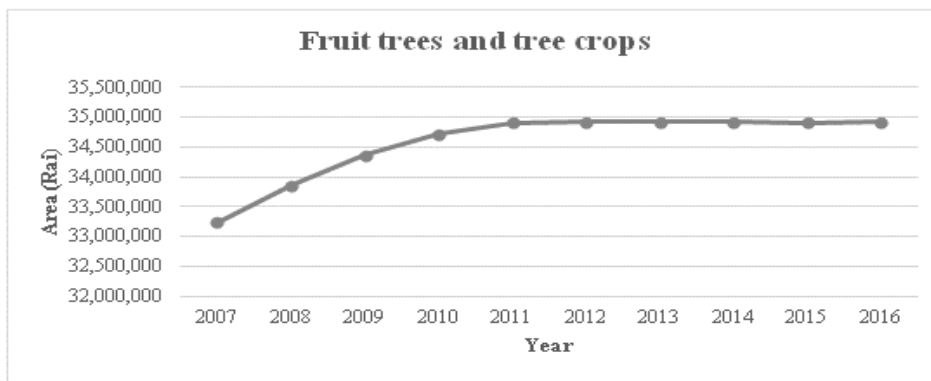


Figure 4. Statistic of land utilization under fruit trees and trees crops during 2007-2016

These figures and descriptions of macro-level trends transforming rural Thailand provide a description of the broader issues. However, when scaling to some of the local dynamics some surprising findings emerge. We next shift our attention to the various research included in this special section to highlight a more nuanced and reflexive engagement on the drivers and dynamics behind rural transformation in Thailand.

3. Following commodity case studies: Articles in the special section

In this special section engaging on agrarian transformation in Thailand, we begin by examining various commodities. In this issue we have compiled four articles studies engaging on four different types of commodities, including: cassava (field crop), rubber (tree plantation crop), tomato (vegetable) and pomelo (fruit tree). The different locations of the studies are shown below in Figure 5.

We begin the special section with cassava, one of the most important economic crops in Thailand, especially in drought prone areas. Cassava is not a staple food for Thai people however, serves as a cash crop grown among smallholders. In 2017, there were 544,774 households growing cassava (Office of Agricultural Economics, 2017). Although Thailand is the second largest cassava producer in the world, it is the largest exporter in the world (Thanabadeephat, nd). About 80% of production is exported. The total area of cassava in Thailand during the crop year 2016-2017 was about 8.9 million rai with the production of about 30 million tons (Office of Agricultural Economics, 2017). Half of the planting area (about 53%) were planted in the northeast region by 349,066 households. In this special section, Anan Polthanee describes the important role of cassava for small holders in the northeast region. He highlights how cassava adapts to physical conditions as topography, climate and soil. He also presents some social and economic performances such as labor, income and marketing in order to provide a synopsis of the role of cassava for smallholder farmers in Northeastern Thailand. These findings highlight that cassava will continue to play an important role in future agricultural systems of the region, particularly due to the increasing observable stressors from a changing climate.

The second article is about Rubber. Thailand is one of the top producers and exporters of natural rubber in the world. It was first planted in the 1990s in the southern and eastern parts of the country where environmental conditions are favorable for rubber plantation. Upon successful harvests cultivation expanded across the country as part of a concerted government policy in 2011 (Win, 2017). In 2016, rubber was planted in 70 provinces including a total land area of 24.7 million rai, and producing over 7.6 million tons. In total, by 2016, about 1.2 million households were planting rubber (Information and Communication Technology Center, 2016). In this issue, Uraiwan Tongkaemkaew et al. takes a slightly different approach among the broader trends around rubber. They observe the overall ecological effects of various rubber cultivation approaches. The authors investigate litterfall, litter decomposition, soil macrofauna and nutrient content in rubber monoculture and rubber-based agroforestry systems. Their comparison, shows that agroforestry yields better results for soil health than rubber monoculture, providing important considerations about the long term effects of particular cultivation trajectories. They also highlight how extension services might further play a role within the sector.

The third article examines the longer-term complexities within contract farming schemes of hybrid tomato seed. Thailand is one of the pioneers in the development of contract farming in Asia. Many crops are structured through contract farming arrangements, especially sugarcane, tobacco and an expanded number of vegetable crops, seeds and processed foods such as canned fish, pineapples and tomato products (Saenjan 1998; Singh 2005; Sriboonchitta and Wiboonpongse 2008). However, the contract system has raised serious concerns regarding social justice,

environmental sustainability and corporate control and has, in many cases, become an elaborate way of exploiting small farmers (Siamwalla 1996; Delforge 2007). Chalee Gedgaew et al., in this special section, examine a village in Khon Kaen province that has successfully and continuously been under contract farming for hybrid tomato seed production for more than 30 years. Although such arrangements have declined and ended among many other villages in Thailand the case study site highlights longstanding partnership between farmers and corporate actors. This article shows some more nuanced effects of contract farming arrangements beyond the commonly presumed negative impacts. They also noted some factors that can yield positive effects, such as generating high profits for growers that had established mutual trust between the grower and company. The study also highlights the precursors for farmers to establish and maintain negotiating power with the companies.

The last paper examines the increasing incidence of a participation fruit orchard: pomelo production. Pomelo or pummelo is one of the tropical fruits widely grown in Asia. In Thailand, it is grown in all regions, but in the past it was most commonly planted in the central and southern regions. In 2013, the total pomelo production area in Thailand was about 186,928 rai, which is about 40% of total production from the central region, and 50% in the southern region (Athipanyakul and Chancharat, 2014). However, Kanchana Duangta et al. in this special section presents pomelo production in a village in the northeast region that is now successfully growing pomelo. The northeast however, was previously known as an unsuitable place for growing pomelo due to the frequent droughts and poor soil fertility of the region. In 2013, the area consisted of about 10,000 rai (~5%) of total area production in the country. Pomelo production is considered as a recently introduced fruit crop in the northeast region and this paper shows how a village in the Northeast was able to successfully introduce and manage pomelo productions.

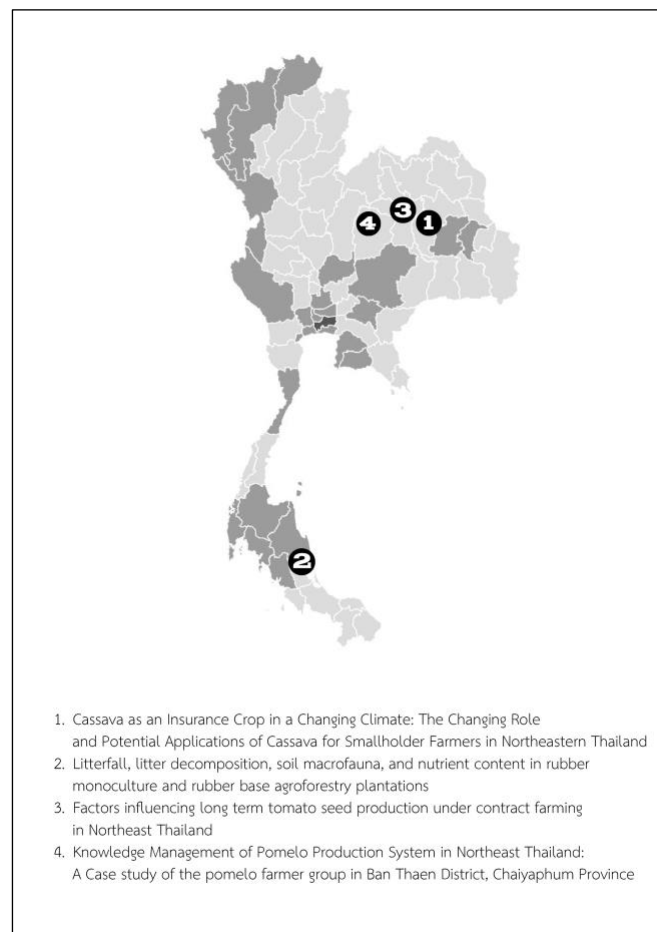


Figure 5. Map on different location of articles and titles included in the special section

4. Conclusion

This special section has sought to engage on large topics on agrarian transformation in Thailand. This introduction article has grounded the broader interests on research in rural Thailand by first contextualizing the macro level trends changing the country and countryside. This includes a shift from agricultural production to other sectors such as manufacturing and the service sector, as well as the increasing incidence of tourism in all parts of the economy. New commodities are emerging across the rural landscape, such as boutique, illicit, and other creative projects, including agrotourism and other type of commoditization arrangements. Labor dynamics are shifting as are the demographics of those that shape the landscapes, such as migration, aging farmers, and a re-imagining of youth in rural areas.

The papers in this special issue have attempted to engage with a sliver of these issues by committing to engagement with these macro issues through richly contextualized local case studies. Herein, the studies follow a set of commodities across its many different facets, engaging on labor, ecology, production scheme, climate change, and more. Such an approach also points to some key strengths and some shortcomings from this engagement on rural transformation.

First, all the papers in this special section examine cash crops. Each of the papers are also single crop studies. As we see in this special section, such approaches can tell us a lot about value chains, economic trends, and how they interact with local livelihoods. While these dynamics provide a unique baseline for understanding commoditization and shifting priorities of production systems, they can also overlook one of the fundamental roles of the agricultural sector, namely food production. Future studies that examine key staples and subsistence factors (around for example, rice and other crops that shape the Thai diet), provides an important complement to issues of agricultural production in Thailand. Furthermore, the move to monoculture cash crops seems an unquestioned ethos in agrarian transformation as prescribed in development programs. These articles show that such changes should not go unquestioned.

Second, the studies on rubber and cassava highlight the importance of ecological and environmental factors. The rubber case shows how soil health is often overlooked for the primacy of production, but that over the long term such consideration are important for a variety of sustainability issues. The cassava paper in particular, further pointed to the stark impacts of climate change to an already drought prone region, which will only experience greater stressors in the future. It also positions the increasing role that cassava will play in future production systems.

Third, we are able to see issues of labor and identity come through in each of these papers. However, the dynamics that shape aging rural labor alongside fleeing younger generations, as well as complementary factors of migration, are central to understanding not only rural transformation, but also the residual effects that they can have in urban areas. Further examination of who work particular agricultural systems are still an area of under-examined research that can tell us a lot about agrarian transformation.

Finally, a unique element among these papers, is a perspective premised from a tradition of extension, one with the continued emphasis on seeking solutions. Both in cassava and rubber, researchers provide recommendations about how to prioritize ways to enhance production from a local perspective. Research complemented by principles of extension can really help to justify local improvements to livelihoods and the environment.

Overall, much research is still needed to understand the perplexing dynamics reshaping agrarian transformation in Thailand. These articles convincingly show however, that although research in recent years has shifted to examining challenges taking place in urban regions, just how important the role of rural spaces continue to play for its effects on people's lives far and wide.

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