

The Rice Value Chain: a Case Study of Thai Rice

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ABSTRACT

The rice value chain has been transforming throughout Asia since the 1990s, although with some unique differences in Thailand. Starting from the farm, the Thai rice value chain behaves more like a collection of streams than a monolithic chain, as in other countries. In Thailand, different types and grades of rice are kept separate throughout the value chain, starting from the point of production ('upstream'), continuing through its processing, storage, and marketing ('midstream'), and ending with different consumer groups ('downstream'). This paper describes the ecological, socio-economic, technical, and management conditions that underlie the rice value chain in Thailand. Upstream, a wealth of local varieties, strengthened by support from a publicly-funded, national, rice breeding program and seed system, allows rice farmers in Thailand the choice of growing either traditional varieties with premium quality and price or modern high-yielding varieties, as dictated by their own ecological and economic circumstances and preferences. Midstream, the paddy harvest from a multitude of farms is sorted into different branches of the value chain as rice of different types and grades are separately processed, stored and marketed. Paddy price differentials are signaled back upstream to influence farmers' decision in the next season. Innovations of mechanical drying and parboiling facilitate fragmenting the paddy market into 'dry' and 'green' rice, each with different price setting criteria. Increased production of modern high-yielding varieties, which is milled into ordinary white rice, has not led to a glut in the market, because of demand from the parboiling industry. The Thai government has played an important role in securing property rights to Thai Hom Mali, the brand name for Thai jasmine rice, in important export markets, as well as enacting laws that explicitly define the grades for differently priced types of milled rice. Technological innovations, including combine harvesting that has reduced labor costs as well as grain breakage during milling due to timely harvesting, mechanical drying and parboiling, novel utilization of the rice husk as fuel, and extraction of high quality oil from the rice bran, have all added

substantial value to each ton of rice. Downstream, pre-packaged, branded rice has become the norm in small provincial and district markets, as well as supermarkets in urban centers. Development of local, small- and medium-sized, modern mills has allowed farmers to enter the retail milled-rice market and facilitated development of new branches of the value chain with the emergence of local specialty rice.

Keywords: Grain quality, Value chain, Rice

INTRODUCTION

Since the 1990s, the rice value chain in Asia has been transforming (Reardon et al., 2012; Reardon et al., 2014). While Thailand was not covered in this survey of Asia's rice producing countries, many of the same changes have taken place with Thai rice (Rerkasem, 2015). Upstream, on-farm rice production has become mechanized, often by employing service providers to prepare the land and to plant and harvest the rice; this has been accompanied by increased use of fertilizer and other chemical inputs, along with improved seed. Midstream, paddy processing has been transformed with improved milling facilities, packaging, and branding. Downstream, in the retail milled-rice market, consumers no longer buy loose rice by the litre or kilogram out of hemp sacks, but choose from branded, pre-packaged rice in the so-called 'supermarket revolution'.

The many types and grades of Thai rice are the product of the entire value stream, from the upstream agro-

diversity described by "the many and changing ways in which farmers manage diverse genetic resources and natural variability, and organize their management in dynamic social and economic contexts" (Brookfield, 2001); to the midstream technological and socio-economic forces driving management and quality control by paddy buyers, mills, and processors; and ending with the retailers, exporters, and varying preferences of different consumer groups. Performance of the value chain is adjusted and improved as retail price information is fed back upstream to influence the mills and ultimately farmers' varietal and management choices.

DIFFERENT RICE FOR DIFFERENT PEOPLE

Thai rice includes four major price- and market-differentiated types of milled rice, namely White rice, Thai Hom Mali rice, parboiled rice, and glutinous rice (Figure 1).