



Pig and maize value chains in northwest Vietnam: Trends and opportunities for smallholders

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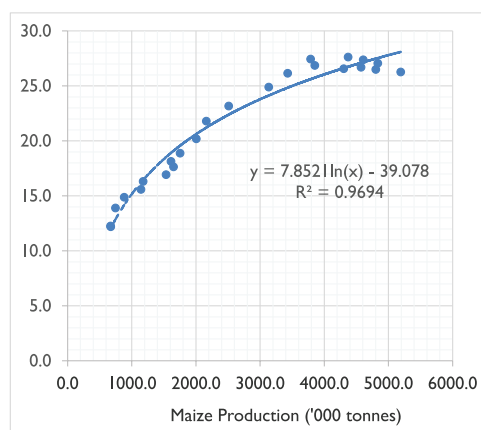
Rising incomes, urbanization and economic growth have led to dramatic increases in demand for meat products, particularly pork, in Vietnam. Better-off consumers have in turn begun looking for higher quality pork, increasingly lean meat. Nevertheless, pork found in the market remains questionable in terms of quality and origin.

Pig production plays a key role in smallholder farming systems in northwest Vietnam. Pork is a major source of animal protein for rural populations, and in recent years, pig rearing has become an important livelihood strategy, generating crucial cash income. Nonetheless the pig sector has become more commercialized over the years and this has boosted dependency on maize production (Figure 1), a major ingredient of animal feed. While increased demand for pork has put pressure on the feed industry to supply the livestock sector, it is also a good opportunity for maize producers.

The processing companies supplying feed to pig producers are highly dependent on maize availability. Local maize from the north-western province of Son La has a good reputation in comparison to what feed processors see as a lower quality Chinese alternative. Intensification of maize production in the uplands has led to increased commercialization on more land. However, most provincial maize producers are still small-scale farmers engaged in mono-cropping. Maize is grown on the mountainous sloping and degraded lands; maize growers are highly exposed to environmental shocks.

Figure 1. Maize–Pig relationship in Vietnam (1990–2013)

Pig Stocks (mil. heads)



Source: FAOSTAT (2015)

The prevailing agricultural support system prioritizes rice farmers, while other crop and particularly livestock producers face difficulty in accessing much needed assistance. This research brief provides some insights into the pork and maize value chains in northwest Vietnam, highlighting the collaboration taking place between business partners in response to the lack of public support services for pig and maize production, processing and marketing.

Box 1: Data sources and methods

The LINK methodology research tool, developed by the International Center for Tropical Agriculture, was used to help understand the structure of the market chain and existing key business models of its protagonists. A rapid approach was employed to collect information from value chain stakeholders during an assessment workshop organized with the help of Son La Province partners, the CASRAD research centre, in 2014. The information collected allowed the characterization of value chains and associated business models. This was supplemented with secondary data and a review of existing literature. This study led to the proposal of a number of entry points for potential production- and marketing-related interventions. The full value chain assessment report can be downloaded here.



Butchers of Hmong black pig meat in Northwest Vietnam

Farmers frequently sell pigs at any age and weight during periods of cash and feed shortages. This market is not considered commercial, as the pork is kept for cultural activities. However, rising demand for local pork by urban consumers is changing this, raising the prospect of the development of a market chain for local pigs. Demand is particularly high during festive periods. Commune collectors are very active during these periods, cooperating with farmers beforehand to estimate numbers of pigs ‘ready to go’ to market. About 20% of pigs are sold directly to local consumers and payment is made in cash. On average each pig weighs around 10–12 kg. About 70% is sold to local collectors with connections with restaurants and hotels in Son La city. Local pigs are relatively fatty and prices for over-fat carcasses are discounted. Collectors and traders do not provide additional services to farmers and try to push the prices down for live pigs. There is no market information about prices; smallholders remain price takers and operate under huge uncertainty.

There is also an emerging longer supply chain that leads to urban areas. However, it is not clear how poor smallholders will be affected by these new arrangements. Future research should consider studying this chain in depth. In case of hybrid and extra-lean pig varieties, the value chains are longer and complex; they include a range of actors (Figure 3). Trading occurs between districts and with nearby provinces. The majority (70%) of live pigs are sold to slaughterhouses. There are some commune-level collectors who also purchase 20% of live pigs directly from producers and sell to district traders. The remaining production is sold as piglets to other local farmers.

Findings

Mapping the pig value chain

Linkages among producers in the Son La uplands and value chain actors can be divided into two categories: short and long market chains. The simplest linkage and flow of products is observed for local pigs (Figure 2). Local pigs are mainly raised in remote mountainous areas far from urban centres. Producers are mostly from poor ethnic minorities. The functioning of this market channel is simple and mostly serves the demand within local markets.

Figure 2. Local pig value chain map in Son La province

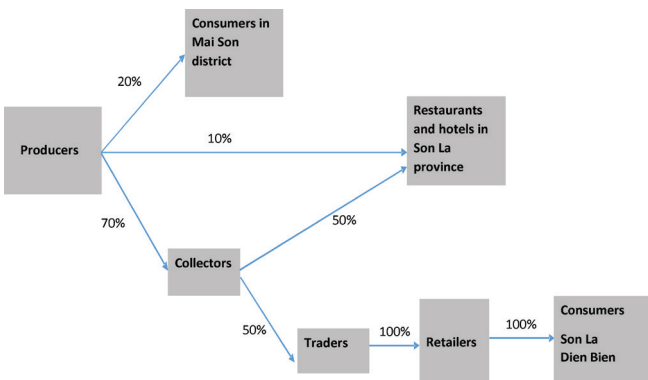
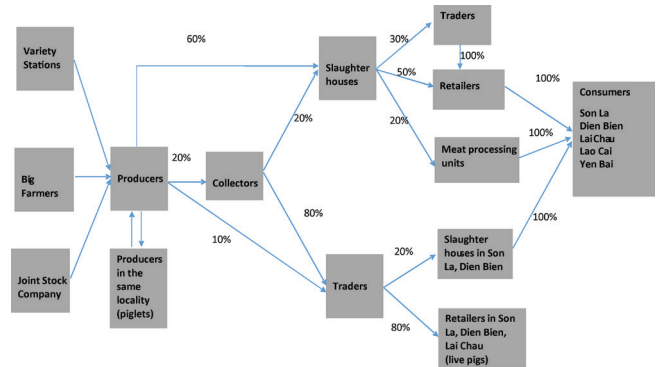


Figure 3. Hybrid and extra-lean pig value chain map in Son La province



The breeding strategy of smallholders is to purchase healthy piglets and rear them as fattening pigs or sows. Piglets can be obtained from the same locality or purchased from district traders. CP Company in Vietnam also sells piglets to pig-rearers. The prices vary in accordance with weight and breed. Piglet production is difficult because sows need special care. Only experienced farmers, usually medium and large producers, engage in the piglet business. In addition, the significant risk of receiving poor-quality pigs from various sources increases the cost in terms of moral hazard.

Slaughterhouses sell half the pork meat to district and province retailers. If the animal is in poor shape, i.e. a poor-quality carcass, slaughterhouse owners offer farmers a lower price. Local meat processing companies purchase 20% of the pork meat. District-level traders purchase 30% of pork meat and sell it to retailers. In this chain, wholesalers play a key role in setting prices, which are then transmitted down to producers. They possess good information about demand and prices and, hence, also play a coordinating role in selling pork meat in urban areas.

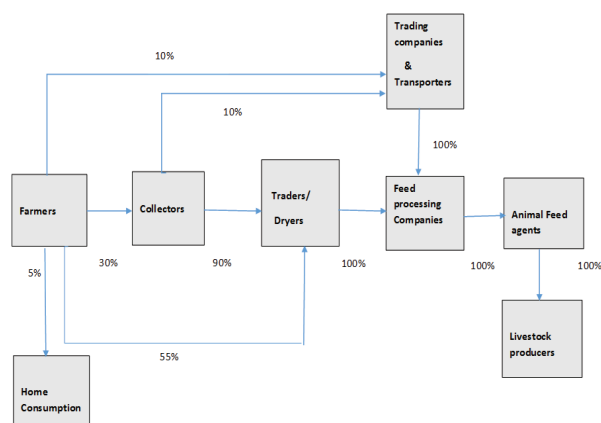


Local pigs in Son La province

Mapping the maize value chains

This product flow follows a chain leading to industrial feed companies (Figure 4). Maize in Son La is highly commercialized and only 5% is kept for home consumption; the rest is used for feeding pigs and poultry or as in-kind payment for rice. Farmers have limited funds, and little production and post-harvest capacity.

Figure 4. Maize value chain map in Son La province



Farmers need to sell their maize immediately after the harvest as they lack storage facilities. Therefore, they predominantly do business with maize collectors and wholesalers who, with their own or rented transport, collect the harvest directly from the mountainous upland maize fields. Farmers have a goods connections with local collectors who distribute about 30% of the maize reaching markets. In competition with big wholesalers purchasing in large volumes, collectors offer farmers stable demand at lower prices. Wealthier farmers, who can afford to keep their maize until prices improve, prefer working directly with wholesalers from whom they receive higher prices.

In the April–August period, as shortages occur, demand for Chinese maize increases. Nevertheless, maize farmers are not able to dictate prices, which are mostly controlled by collectors and wholesalers. Farmers, particularly in remote uplands, are not well informed about market prices and accept those offered at the farm-gate. Hence, maize production does not promptly respond to market demand in terms of quality and quantity. Maize prices are not stable and vary significantly during the harvesting season in Son La and Hoa Binh. When maize from Son La is available, the price drops.

Wholesalers are big players and purchase about 55% of maize directly from farmers. Wholesalers use their own transportation to bring the purchased maize, by road and river, to the lowland-based processing factories. Preferring to sell to wholesalers, farmers use local collectors as a last resort; one reason why collectors offer flexible contracts. Trade companies and private transporters purchase 10% of the maize and sell it directly to feed processing factories. Collectors also work closely with private transporters and sell 10% of their purchased maize to feed processors.

Since private transporters engage in shipping many products, they prefer working with collectors, as it is more cost effective than working directly with farmers. Moving the product down the chain, wholesalers buy 90% of collectors' maize and sell it on to feed processing factories. They have their own collectors in each village and work closely together to inform them of their purchasing requirements at harvest time. Both collectors and wholesalers use the services of private dryers; some own drying facilities.

Feed processing companies make contracts with wholesalers and trade companies and dictate the volume of maize to be purchased and the price paid. Animal feed distribution agents are the final actors before maize feed reaches the end users: pig producers. The feed distribution agents make contracts at the beginning of the year, agreeing the amount and price of feed to be purchased. In competition with each other, well-established agents own their transportation and shops in lowland areas.

Implications for policy and interventions

There is a tremendous need to invest in village and commune roads to improve connections with main roads. This will increase the chances of poor farmers' getting better information and improve their access to input and output markets. Upgrading slaughtering facilities and capacities, as well as traditional market outlets, would also improve the processing and marketing of both pork and maize.

Local and provincial services of the Ministry of Agriculture and Rural Development still have an important role to play in enhancing the flow of market information and building a network of producers able to exchange production- and market-related information. Extension and veterinary services targeting maize and pig producers also need strengthening.

Partnerships with agricultural research institutes and the provincial government could focus on conserving local pig breeds and establishing local breed development programs. These partnerships would also be useful in developing and providing training on improved production systems for pig farmers, and in developing locally relevant improved housing and environmentally-friendly systems for the disposal of pig waste. For maize, developing climate-tolerant varieties and conducting research on better crop management are key to sustaining increased production levels. Research and extension partners could also provide practical on-farm training in remote areas and facilitate the direct transfer of breeding material from research centres to rural mountainous communities.

Furthermore, the collaboration already witnessed between some actors in the maize and pig value chains should be strengthened into industry-wide cooperation through the support of commodity associations or innovation platforms. This could foster market-driven systems to enhance the information flow on prices and marketing activities. As key players in the maize and pig value chains,

feed processing companies and maize traders should get involved in introducing post-harvest technologies to boost farm and value chain productivity. They should also help fostering collective action and organization to empower farmers involved in input procurement and output marketing, thereby reducing their own costs related to dealing with multiple smallholders.

Finally, maize and pig production and marketing system stakeholders should take advantage of existing linkages to collectively make further chain-wide improvements. Innovations in alternative mechanisms to link up farmers with effective extension and advisory services could emerge from this collaboration, thus refining the delivery of appropriate pig-husbandry and maize-production technology transfer packages in the most efficient manner. In the longer run, multi-stakeholder collaboration within the maize and pig value chains could lead to improvements in the genetic quality of breeds and strengthen quality-control practices used in breeding, leading to better quality maize and pigs to satisfy the demands of chain actors and end consumers.

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