



# Consumer Preference for Indigenous Vegetables

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Background

In the past, Indonesian agriculture has provided an important contribution to local livelihoods and the national economy, accounting for 13.8% of gross national product (BPS, 2008). It is estimated that there are 24 million ha of underutilized dry agricultural land in Indonesia. Poor households living in those areas have a high level of dependency on agriculture because the non-agricultural economy is not well developed. It is crucial that the government implement policies that stimulate and diversify smallholder agricultural, horticultural and livestock sectors, including the rehabilitation of private land with high-value timber and fruit tree species. If supported, smallholder sectors can contribute to reducing rural poverty and strengthening the national economy. A research study was conducted in and around Bogor, West Java, to document consumer knowledge, preferences and consumption behavior in relation to four indigenous vegetables—*katuk*, *kucai*, *honje* and *tebu telor*—and inform stakeholders of opportunities for commercialization.



## Research Methods

**Location.** Bogor is both the capital city and a district of the province of West Java. The city has a population of approximately 800 000 (Bogor Municipality, 2010) and an additional 2 000 000 outside the city (total district population c. 3 000 000). There is a high demand for vegetable and fruit crops in Bogor and Jakarta, the nearby national capital, including indigenous vegetable crops that are important components of traditional cuisine. Target beneficiaries of the study were smallholder farmers in Nanggung sub-district where agriculture is the main occupation of 59.4% of the working population but provides only 14% of household incomes.

### Vegetable species

*Katuk* (*Sauropus androgynus*), *kucai* (*Allium odorum*), *honje* (*Etingera elatior*, ginger bud in English) and *tebu telor* (*Saccharum officinarum*) are indigenous vegetable species that have stable market demands and lucrative market prices. Demand for all four commodities exceeds existing supply.

### Consumer knowledge and preference study

The study was conducted June–September 2007 using a semi-structured questionnaire. There were 150 respondents representing vegetable customers at the village, sub-district and city levels.

### Data Analysis

Data collected through the consumer preference study was analyzed using simple regression to quantify the affect of independent variables and on the quantity of commodities purchased by consumers.

## Results

**Consumer familiarity with commodities.** Consumer awareness varied by location and commodity. At the village and sub-district levels, nearly all consumers were familiar with all four commodities; less than 1% was unfamiliar with *honje* and 2.5% were unfamiliar with *tebu telor*. In the city there was a greater level of unfamiliarity; 2.6% of respondents were unfamiliar with *kucai*, 26.7% unfamiliar with *honje*, and 30% unfamiliar with *tebu telor*. All consumers were familiar with *katuk*.

**Consumer perception of commodity use.** There are four main uses of the commodities: vegetable, spice, fruit and medicine/herb. Respondents considered the main use of *katuk*, *kucai* and *tebu telor* to be as vegetables. Only 2 to 7.3% considered them to be useful spices, fruits or medicines/herbs. *Honje* was seen as having multiple uses: 59.3% of respondents consider *honje* a fruit, 42.0% considered it a spice, 41.3% considered it a vegetable and 4.7% consider it a medicine/herb.

**Consumer perception of commodity price.** *Katuk*, *kucai* and *tebu telor* are sold by the bunch; *konje* by the individual fruit. Village respondents consider a reasonable price for *katuk* and *kucai* to be not more than Rp 1000 per bunch. Sub-district and city respondents consider a fair price for either commodity to be up to Rp 2000 per bunch. For *honje*, village respondents considered a fair price to be not more than Rp 1000 per fruit. Respondents at both the sub-district and city levels were unable to estimate a reasonable price for *honje* due to limited familiarity with it and pricing. Both villager and the sub-district respondents agreed a reasonable price for *tebu telor* is not more than Rp 1000 per bunch, while city residents consider Rp 4000 per bunch as reasonable. Better quality is the determining factor of consumers' willingness to pay the prices indicated. Consumers are not willing to pay premium prices for the commodity quality currently available in markets.



Honje (*Etingera elatior*)



Katuk (*Sauropus androgynus*)



Kucai (*Allium odorum*)



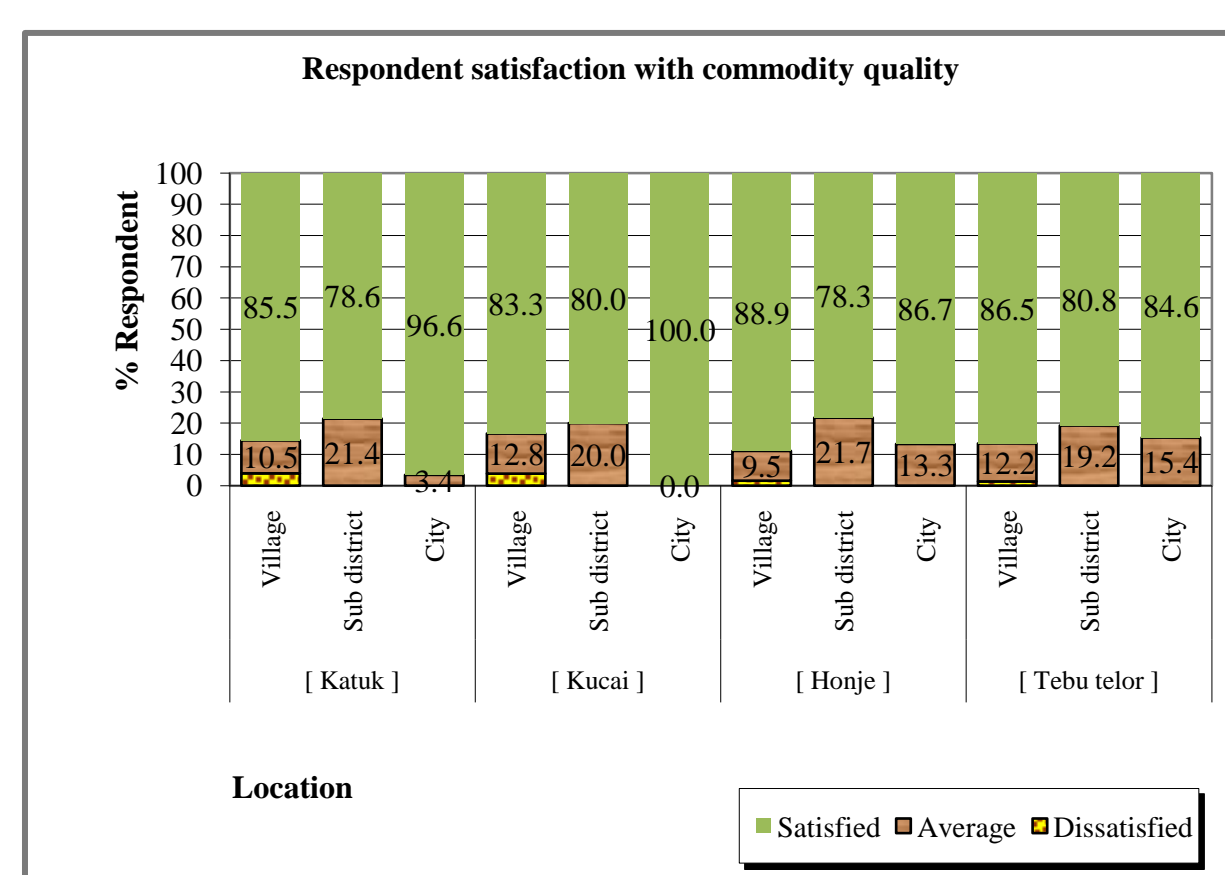
Tebu telor (*Saccharum officinarum*)

## Conclusions

City and sub-district markets are more lucrative and profitable for traders. Consumers in those locations are affluent, quality conscious and willing to pay higher prices. A perceived scarcity can result in affluent consumers increasing purchases. Frequent weekly visits indicate those consumers prefer markets as the main source of vegetables for their household. Traders have responded to this opportunity by developing appropriate market chains. Higher quality *katuk*, *kucai* and *honje* are available in city and sub-district markets compared to the villages.

Village consumers are price conscious and quality aware. They visit markets less frequent (monthly) than consumers in the city and sub-district and purchase smaller quantities. Village consumers decrease their purchases in response to higher prices and perceptions of low quality. These results support related studies that find village consumers commonly purchase vegetables directly from farmer neighbors, a transaction that provides mutual benefits to both parties in terms of convenience and time/money saved by not traveling to markets.

While city and sub-district consumers are generally satisfied with the quality currently available in markets, they would prefer more reliable supplies in terms of quantity and higher quality (and are willing to pay premiums for higher quality). Village consumers also express a willingness to pay higher prices for better quality. The perceived shortage of commodities and consumers' willingness to pay premium prices for quality provides opportunities for farmers and traders to increase production, processing and marketing of quality commodities.



**Factors influencing consumer purchase decisions.** For all four commodities, consumers purchasing decision is primarily based on a combination of price and quality, accounting for 75.8% of purchase decision in villages, 78.7% in sub-districts and 54.3% in the city.

**Consumer satisfaction with commodity quality.** Consumer satisfaction with commodity quality was high, averaging 85.6% across all locations and species. Satisfaction with individual species was roughly the same, varying from 87.8% (*kucai*) to 84.0% (*tebu telor*). Satisfaction with quality relates to current market prices.

