



Improving smallholder farmer incomes through strategic market development in mango supply chains in southern Vietnam

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Activity 1.4 Mango purchasing behaviour & consumer preferences in Hanoi and HCMC

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Implementing Agency



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Aim and purpose

- ▶ An online survey of over 1,000 Vietnamese consumers in Hanoi and HCMC
- ▶ Key data collected—mango (both fresh and processed) purchasing behaviour, consumption attitudes, preferences for mango characteristics, and socio-economic information
- ▶ Quantitative analytical methods such as descriptive statistics, econometric modelling are used to analyse Vietnamese urban consumers' mango purchasing behaviour and preferences



Research aim

- ▶ Understand mango consumption behaviour in HCMC and Hanoi
- ▶ Understand consumers' attitudes towards mango and mango purchase
- ▶ Understand consumers' preferences for mango attributes and their willingness to pay (WTP) for such attributes

Literature review

- ▶ A significant gap in understanding consumer preference of mangoes in Vietnam
- ▶ For fruit and vegetable in general, the literature highlights a difference in consumers' preference between Hanoi and HCMC, with a preference towards product safety in Hanoi (CGFAR, 2019)
- ▶ Cross elasticity of fruit/vegetables and other food has relatively low value (SCAP, 2009), and therefore, fruit and vegetable are not easily substituted by other food products
- ▶ However, substitutability within the fruit and vegetable category, such as domestic and imported products, certified and uncertified products, traceable and traceable products are not well understood in Vietnam



Literature review

- ▶ Available research has highlighted freshness, fruit appearance, taste, and food safety certification among the top priorities when consumers choose fruit
- ▶ Regarding mango, consumers in Hanoi were more concerned about freshness, taste/aroma, skin colour, shape and flesh colour; while those in HCMC paid more attention to shape, freshness, taste and skin colour (SCAP 2009). In 2018, the same priorities in freshness and taste remain (CGFAR 2019)
- ▶ CGFAR (2019) also found an additional factor influencing household decisions to buy mangoes – food safety



Factors influencing consumers' choice of selected fruit in Hanoi & HCMC

Factors influencing choice	----- Hanoi -----				----- Ho Chi Minh -----			
	Mango	Peach	Pear	Plum	Mango	Peach	Pear	Plum
Food safety	35.4%	37.1%	41.3%	33.8%	17.3%	13.4%	18.0%	13.8%
Freshness	13.3%	12.1%	10.4%	15.9%	27.1%	13.3%	24.9%	18.5%
Taste	21.6%	11.1%	10.8%	19.2%	18.6%	7.5%	8.2%	12.0%
Origin	13.7%	22.8%	19.5%	17.6%	9.2%	7.1%	11.2%	13.2%
Nutritional content	8.5%	8.8%	7.5%	3.9%	12.2%	6.4%	11.7%	6.3%
Price	1.6%	0.9%	1.4%	1.2%	6.2%	6.2%	9.1%	7.9%
Easy to prepare	1.6%	1.3%	1.4%	2.5%	0.5%	0.4%	0.6%	0.7%
Others	4.2%	5.6%	7.5%	3.5%	8.2%	2.6%	4.1%	6.1%
Never purchase this item	0.1%	0.3%	0.1%	2.6%	0.6%	43.1%	12.0%	21.5%



Methodology

- ▶ Online survey of mango consumers in HCMC (around 500) and Hanoi (around 500), in October 2019
- ▶ Online panellists were from GMO and survey was programmed by GMO.
- ▶ It took around 15 mins to complete the survey instrument
- ▶ There is a choice experiment at the end of the survey to elicit consumers' WTP for different mango attributes



Suppose you are buying FRESH MANGOES for consumption as a fruit from the store/market place where you often buy fruit. The quantity for your purchase would be around 1 to 2 kgs. There are 8 groups of mango purchase options A and B with 2 types of mangoes. Please choose which type you are more likely to buy in each group? You may choose NOT TO BUY “neither of A or B”, if none of the two types is appealing to you. The characteristics of mango are:

- Colour — Green; yellow; blush
- Size — Small (less than 300g per fruit); medium (300-500g per fruit); large (more than 500g per fruit)
- Place of origin indication— no indication; indication on sticker on the fruit; indication on the product label; indication with a QR code for tracing
- Production certification— VietGap certification; no certification at all
- Aroma— when ripe: no fragrance; subtle; fragrant
- Readiness— ready to eat at purchase; ready to eat in 1 to 2 days; ready to eat in 3 or more days
- Price per kg— 20,000 VND/kg; 30,000 VND/kg; 40,000 VND/kg; 50,000 VND/kg; 60,000 VND/kg

Once again, please treat this exercise seriously and as if YOU WERE ACTUALLY CONSIDERING MANGO PURCHASE IN STORE!!!

The pictures are for illustrative purposes only for colour and size, other attributes such as origin, production certification, aroma, readiness and price are presented in the table.

Methodology

Choice set No.	Color	Size	Origin	Production	Aroma	Readiness	Price	Alt
	Yellow	More than 500g	Indication in the product label	<u>VietGAP</u> certification	Subtle	Ready to eat in 1-2days	30	A <input type="checkbox"/>
	Green	300g-500g	Indication by a sticker on the fruit	No certification	Fragrant	Ready to eat in 3 days or more	30	B <input type="checkbox"/>
								Neither of A or B <input type="checkbox"/>

	Blush	300g-500g	Indication in the product label	No certification	Fragrant	Ready to eat in 1-2days	50	A <input type="checkbox"/>
	Green	More than 500g	Indication with a QR code for tracing	<u>VietGAP</u> certification	No fragrance	Ready to eat in 3 days or more	50	B <input type="checkbox"/>
								Neither of A or B <input type="checkbox"/>



Sample key characteristics

- ▶ N=1,050
- ▶ Mean age=35
- ▶ Male (34%), female (66%)
- ▶ On average household size is 4
- ▶ On average household monthly income is 24.4 million VND
- ▶ On average household monthly expenditure on fresh fruits is 1.477 million VND

Unemployed	1%
Full time	84%
Part time	11%
Stay at home parent (housewife/husband)	3%
Retired	1%

High school and below	6%
Technical and/or vocational school	5%
Bachelor degree	81%
Master degree and above	8%



Key results

Mango purchase

Where do you currently buy mangoes from?

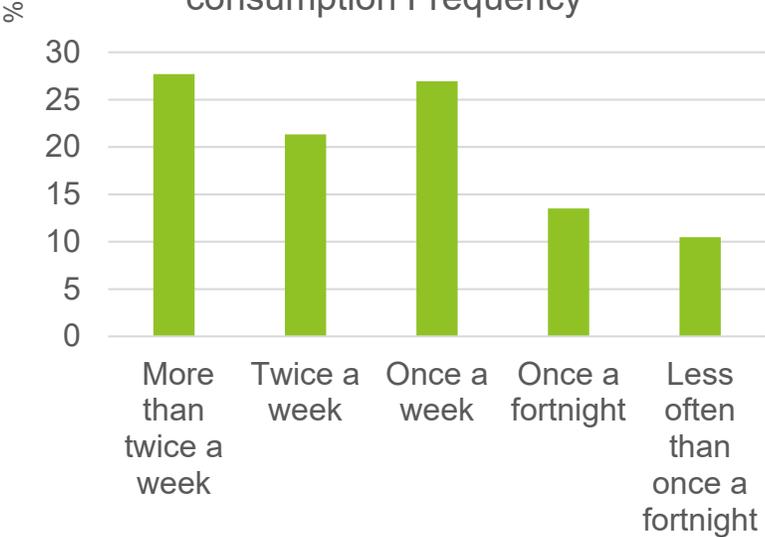
	Formal wet market	Supermarkets	E-commerce	Social media	Specialty fruit stores	Informal street vendors
Never %	2	2	47	44	3	11
Rarely %	7	10	29	32	13	33
Sometimes %	31	38	17	19	41	42
often %	51	42	5	4	36	11
always %	9	8	1	1	7	2
Trust score	4.3	5.1	2.8	2.8	4.8	3.4

Trust score is from 1 to 7, 1 being trust least and 7 being trust most.

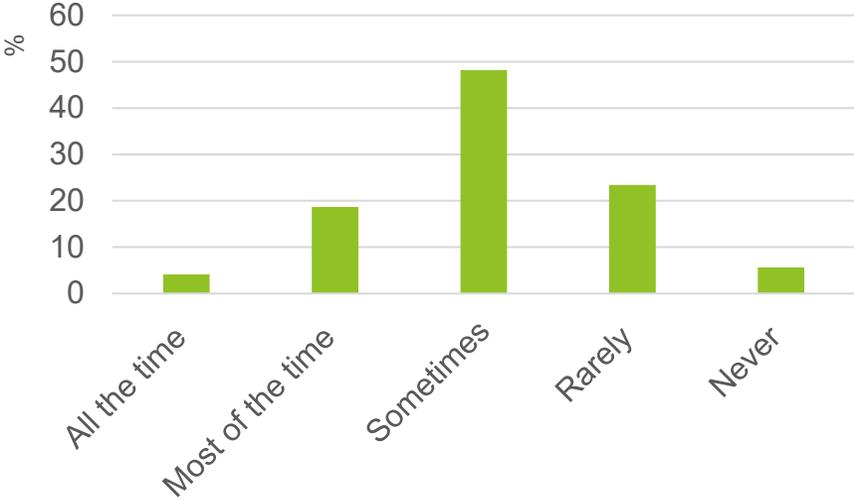
Key results



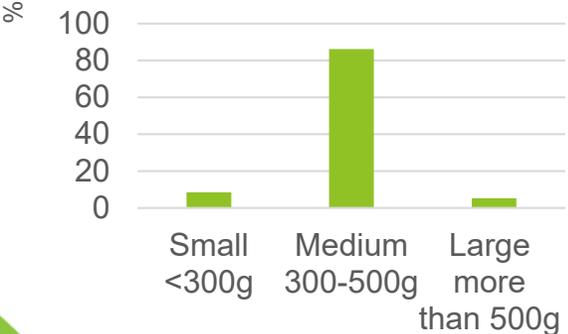
Fresh Mango Purchase for at home consumption Frequency



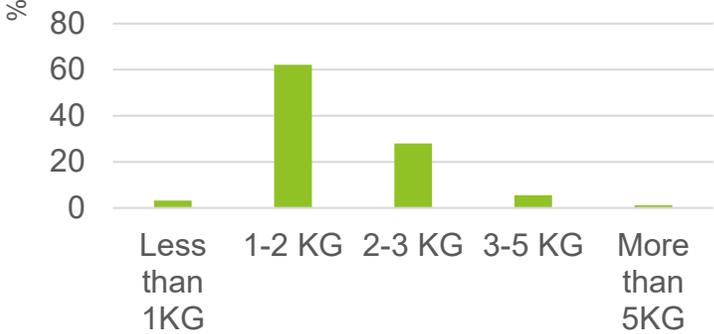
Fresh mango purchase for out-of-home consumption



Mango size preference



Average purchase quantity



Intended use

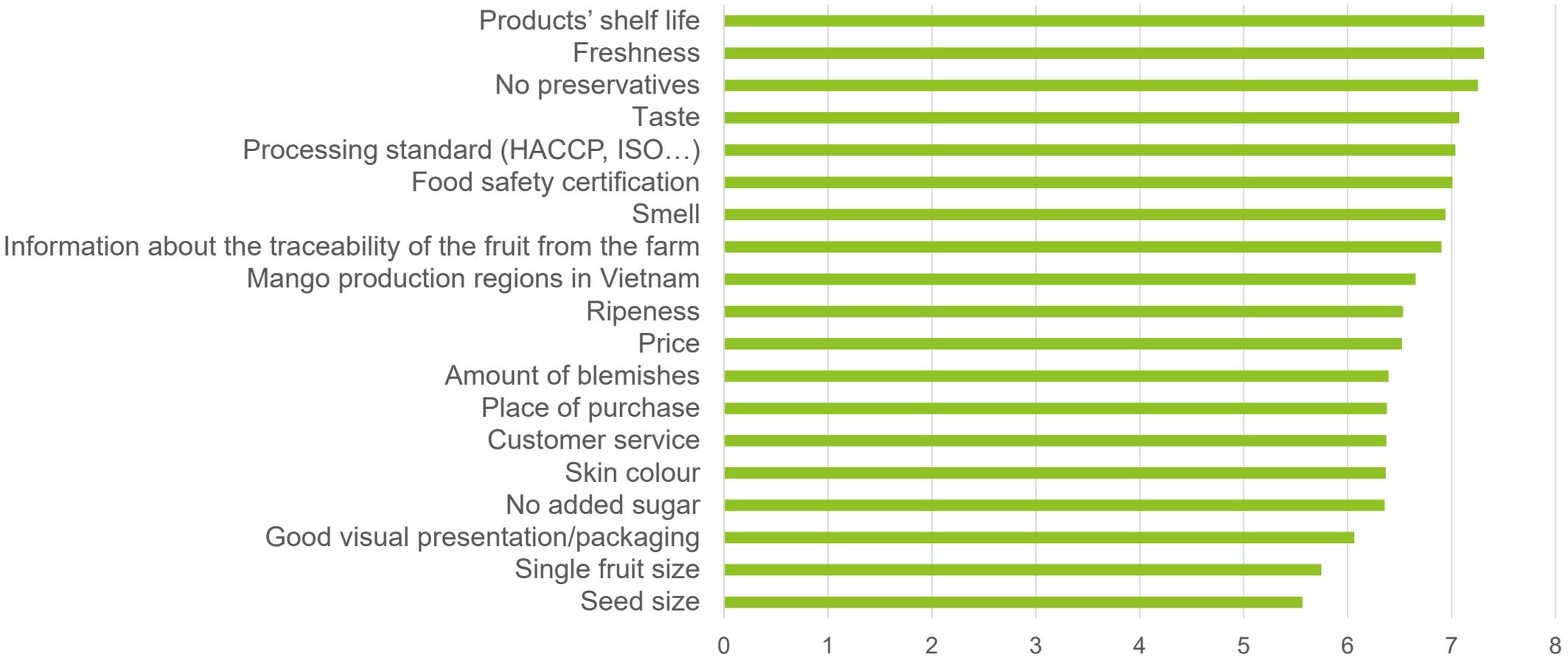




Key results

Mango purchase

Characteristics that influence mango purchase

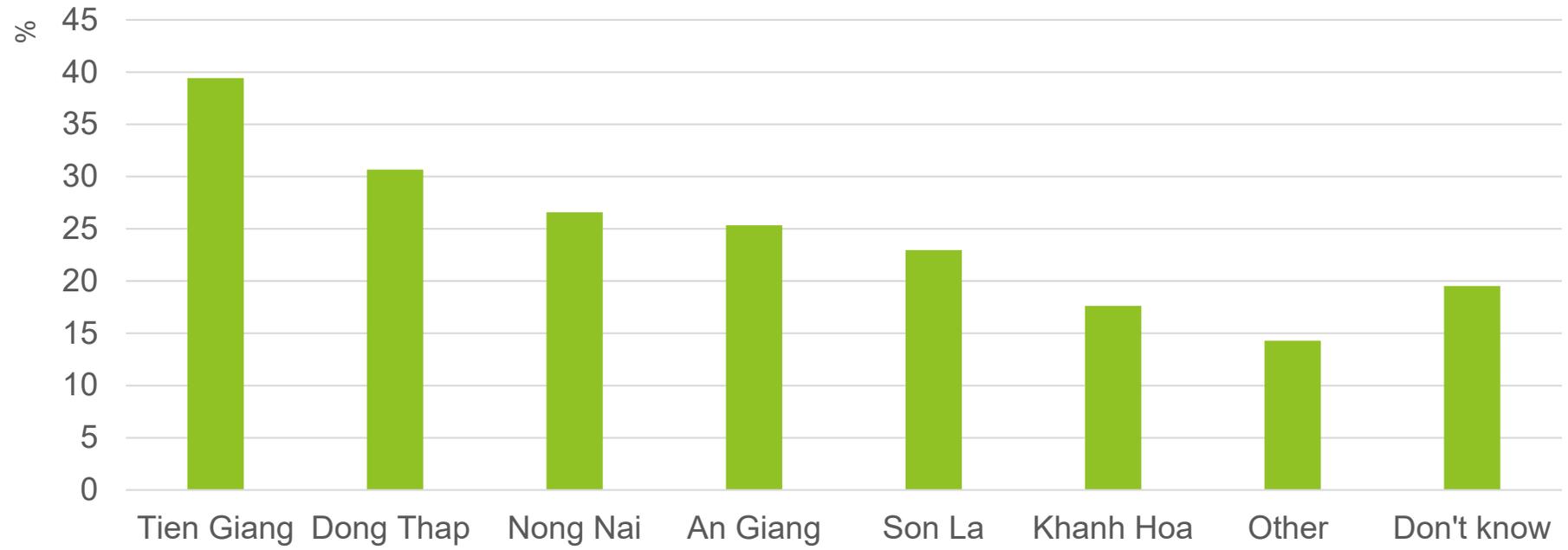




Key results

Mango purchase

In the last 6 months, did you or your family purchase mango produced in the following provinces (select all that apply)?



Attitudinal statements towards mango purchasing



Key results

- ▶ Discrete Choice Experiment (DCE)
- ▶ Previously presented preferences and attitudes are one dimensional and hence there is no trade-off
- ▶ It is important to evaluate consumers' choices when they need to decide among a number of characteristics simultaneously
- ▶ DCE can reveal how much consumers are willing to pay in order to obtain certain characteristics
- ▶ DCE data will be analysed in the next few weeks



Recommended interventions

- ▶ On farm: Production Certification
- ▶ Whole chain: Improve transportation, packaging and storage to increase maturity at harvest so that most mangoes are ready to eat when in-store
- ▶ Retail: Introduce 3- or 4-piece package; develop packaging that can increase storage time at home; QR code for place of origin indication
- ▶ Undertake a detailed evaluation of the retail and HORECA segments.

Conclusion

- ▶ Targeted population of the online survey are younger and more educated than the general population
- ▶ Urban consumers in HCMC and Hanoi buy mangoes often from formal wet markets, supermarkets and specialty fruit stores
- ▶ Consumers value food safety and therefore measures that are used to promote food safety are highly desired
- ▶ Other factors are also important for consumers such as storage time, freshness, taste/aroma and ripeness
- ▶ However, whether consumers are willing to pay a price premium for these desired attributes is yet to be answered by the DCE analyses.



References

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