

## Working Paper Series

This working paper forms part of the ACIAR Project AGB/2012/061  
*Improving smallholder farmer incomes through strategic market  
development in mango supply chains in southern Vietnam*

**Activity:**            **A1.8 Wholesale market monitoring study**

Date:                    June 2021

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## Summary

This study aims to capture and track mango pricing information in Hanoi and Ho Chi Minh city (HCMC) wholesale markets by collecting weekly mango prices from 20 wholesalers: 10 wholesalers from Thu Duc market (HCMC), 05 wholesalers from Binh Dien market (HCMC), and 05 wholesalers from Long Bien market (Hanoi).

Results from this market monitoring study revealed the following key insights:

- Cat Hoa Loc mango is the most popular variety at the southern wholesale market. Compared to other varieties, this variety is the premium one and sold at the highest prices;
- “Weight” is the main criterion for grading mangoes at the wholesale markets;
- Except for Cambodian Keo mango, other mango varieties at wholesale markets are grown domestically;
- Mangoes at Thu Duc market not only come from western provinces but also eastern provinces and south-central coast provinces, which makes mangoes available at this market almost year-round;
- The majority of mangoes at Binh Dien market come from western provinces;
- Southern mangoes available at Long Bien market mainly come from Dong Thap (transported to the market by trucks without cold storage);
- Collectors are the main suppliers for the wholesale markets;
- Vendors and stalls in wet markets are the main buyers of wholesale markets. However, in recent years, the wholesale markets also sell directly to consumers;
- Mango prices, in general, are the highest in December and January (off-season) and the lowest in March (on-season);
- Mango prices at Long Bien market are higher than those in the southern wholesale markets;
- The effects of COVID19 on Cat Chu’s and Cambodian Keo’s prices are more significant than on Cat Hoa Loc’s price.

The study's outputs can be used for: (1) cost and benefit analysis to measure the benefits from interventions that improve mango quality, change variety, or manipulate flowering time; and (2) better understanding mango wholesale price movement and mango wholesale trading information by stakeholders in the mango value chain.

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## Introduction

The overarching aim of this study is to capture and track mango pricing information in Hanoi and HCMC wholesale markets.

The specific objectives entail:

1. Describing general mangoes trading information of mangoes at the wholesale markets;
2. Monitoring weekly mango prices in the Hanoi and Ho Chi Minh City wholesale markets;
3. Observing price gaps between different mango varieties and different months throughout the year at the wholesale markets.

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## Method

This study collected wholesale mango prices in Hanoi and Ho Chi Minh City – the two biggest domestic markets of any agricultural products with a population of 8,093,9000 people and 9,038,600 people respectively (General Statistics Office of Vietnam, 2020).

Specifically, weekly mango prices were collected from 20 wholesalers: 10 from Thu Duc market (the largest fruits & vegetables wholesale market in Ho Chi Minh city), 5 from Binh Dien market (the biggest wholesale market of HCMC, however, Binh Dien market specialises in seafood and fishes products), and 5 from Long Bien market (a main agricultural product wholesale market in Hanoi).

The research team designed two checklists (see Appendix 1 and Appendix 2) for collecting general information of wholesale markets and weekly wholesalers' data, respectively. Three semi-structured interviews with representatives of market management units (MMU) of the three markets were conducted initially before weekly data collection. The MMUs then supported the weekly data collection of wholesale mango prices at their markets.

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# Results and discussions

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## I. Overall information of the wholesale markets

### Thu Duc wholesale market

Thu Duc Agriculture Wholesale Market is one of the three major wholesale markets in Ho Chi Minh City. This market is located at the HCMC east gateway (near 1A Highway and North-South railway) that provides easy access to eastern provinces, Central Highlands, and central provinces. Thu Duc market attracts numerous food and agricultural products from other eastern, northern, central, and western provinces and mainly serves the HCMC market (and also other provinces) (Thu Duc Agro Market, 2020).

The floor area of Thu Duc market is 203,676 m<sup>2</sup> with a total of 1,582 stalls that are divided into three sub-markets: market A with 996 stalls trading fruits, market B with 296 stalls trading vegetables, and remaining stalls in market C trading food and flowers. Besides selling plenty of fruit varieties from many provinces of Vietnam, Thu Duc wholesalers also sell imported fruits from China, New Zealand, Australia, USA, etc., which attracts many retailers and vendors in HCMC (and also in other provinces of Vietnam).

### Binh Dien wholesale market

Binh Dien wholesale market is the biggest wholesale market in HCMC with 65 hectares (650,000 m<sup>2</sup>) floor area located at the western gateway of HCMC, at Nguyen Van Linh Boulevard and only 750 metres to 1A Highway. Binh Dien wholesale market is divided into seven sub-markets with 273 stalls in market T (13,290 m<sup>2</sup>) trading fresh fruits (Binh Dien Market, 2020).

### Long Bien wholesale market

Long Bien wholesale market is the second biggest market in Hanoi (after Dong Xuan market), established in 1992, at a very convenient location near Long Bien Bridge and Tran Nhat Duat street.

The total floor area of Long Bien market is 27,145 m<sup>2</sup>. This wholesale market specialises in fruits, agricultural products, and aquatic products. 326 wholesalers in the market trade fruits and 329 wholesalers trade vegetables (Long Bien Market Management Unit, 2020).

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## II. General trading information of mangoes at the wholesale markets

### Main mango varieties at the wholesale markets

All wholesalers in this study sell domestically grown mangoes among which, Cat Hoa Loc mango is the most popular variety at Thu Duc market and Binh Dien market. However, wholesalers at Long Bien market do not sell this variety. Instead, Cat Chu mango is the most popular variety at Long Bien market. Cat Chu mango is also available in southern wholesale markets but not as popular as Cat Hoa Loc mango. Keo mangoes are imported directly from Cambodia which is the only imported variety sold in the three wholesale markets. Cat Hoa Loc mango is available almost year-round while Cat Chu mango and Keo mango are only available during peak season and shoulder season.

In addition to the three main varieties (Cat Hoa Loc, Cat Chu, and Keo), there are many other mango varieties sold in the wholesale markets but with much smaller quantities. Specifically, Binh Dien wholesalers sell Taiwanese mango grown in Dong Thap, Long Bien wholesalers sell Australian mango grown in Nha Trang, and other varieties from northern provinces. Compared to Long Bien and Binh Dien, Thu Duc wholesalers sell more varieties such as Taiwanese mango, Thanh Ca mango, Australian mango (domestically grown), and “Mút” mango imported from China (but not regularly).

### **Mango grading criteria at the wholesale markets**

After receiving mangoes from suppliers, wholesalers grade and display them in different boxes/baskets. “Weight” is the main criterion used for grading. For example, Binh Dien wholesalers classify Cat Hoa Loc into grade 1, grade 2, grade 3 if each mango is greater than or equal to 500gram, from 400gram to 500gram, less than or equal to 400gram, respectively. Weight of Cat Chu for grade 1, grade 2, and grade 3 at Binh Dien is slightly lower than that of Cat Hoa Loc: greater than or equal to 450gram-500gram, from 300gram to 400gram, and less than or equal to 300gram, respectively.

In addition to weight, wholesalers also grade mangoes by other criteria such as shape, skin color, and ripeness. For instance, based on mango weight, Thu Duc wholesalers classify mangoes into grade 1 and grade 2. If they can not sell grade 1 and 2 mangoes after a period (normally one, two, or three days depends on mango variety), they will sell the ripe mangoes at grade 3 prices. For some low-price varieties, wholesalers do not grade them.

### **Mango’s places of production at the wholesale markets**

Most mango varieties at the three markets are grown domestically except for the majority of Green Keo mangoes that is imported directly from Cambodia. The origin of mango in Thu Duc market is more diverse than that in the other two markets. The majority of mangoes at Binh Dien market come from western provinces and southern mangoes available at Long Bien market mainly come from Dong Thap. Mangoes at Thu Duc market not only come from western provinces but also eastern provinces and south-central coast provinces. In general, Cao Lanh mango (Dong Thap province) is the most popular place of production while mangoes grown in Nha Trang and Can Tho are also quite popular (*see Table 1, Table 2*).

**Table 1: Places of production of three main varieties: Cat Hoa Loc, Cat Chu and Green Keo**

Variety	Thu Duc	Binh Dien	Long Bien
<b>Cat Hoa Loc</b>	<ul style="list-style-type: none"> <li>• Dong Thap (Cao Lanh);</li> <li>• Eastern provinces (Lam Dong, Binh Phuoc, Long Khanh, Dong Nai, Binh Duong);</li> <li>• Other western provinces: Can Tho, Tien Giang, An Giang (Chau Doc)...</li> <li>• South Central Coast provinces: Nha Trang (Khanh Hoa), Binh Thuan, Binh Dinh</li> </ul>	<ul style="list-style-type: none"> <li>• Dong Thap (Cao Lanh);</li> <li>• An Giang (Chau Doc);</li> <li>• Other western provinces</li> <li>• Eastern provinces</li> </ul>	
<b>Cat Chu</b>	<ul style="list-style-type: none"> <li>• Dong Thap (Cao Lanh);</li> <li>• Eastern provinces (Dong Nai, Binh Duong);</li> <li>• Other western provinces: Can Tho, An Giang (Chau Doc);</li> <li>• Other eastern provinces (Lam Dong, Binh Phuoc, Long Khanh);</li> <li>• Nha Trang (Khanh Hoa).</li> </ul>	<ul style="list-style-type: none"> <li>• Dong Thap (Cao Lanh);</li> <li>• Can Tho;</li> <li>• Other western provinces.</li> </ul>	Dong Thap (Cao Lanh).
<b>Green Keo</b>	<ul style="list-style-type: none"> <li>• Cambodia</li> </ul>	<ul style="list-style-type: none"> <li>• Cambodia</li> <li>• Cao Lanh</li> </ul>	Cambodia

Source: Weekly mango prices at Thu Duc, Binh Dien, and Long Bien wholesale markets

**Table 2: Places of production of other mango varieties**

Variety	Thu Duc	Binh Dien	Long Bien
Taiwanese mango	<ul style="list-style-type: none"> <li>• Western Provinces;</li> <li>• Nha Trang (Khanh Hoa).</li> </ul>	<ul style="list-style-type: none"> <li>• Dong Thap;</li> <li>• An Giang.</li> </ul>	<ul style="list-style-type: none"> <li>• An Giang.</li> </ul>
Tu Quy mango	<ul style="list-style-type: none"> <li>• Nha Trang (Khanh Hoa).</li> </ul>	<ul style="list-style-type: none"> <li>• Ben Tre.</li> </ul>	<ul style="list-style-type: none"> <li>• Ben Tre.</li> </ul>
Thai mango	<ul style="list-style-type: none"> <li>• Dong Thap (Cao Lanh), Can Tho, Tien Giang;</li> <li>• Eastern provinces (Lam Dong, Binh Phuoc, Long Khanh);</li> <li>• Nha Trang (Khanh Hoa).</li> </ul>	<ul style="list-style-type: none"> <li>• Dong Thap.</li> </ul>	<ul style="list-style-type: none"> <li>• Dong Thap.</li> </ul>
Australian mango	<ul style="list-style-type: none"> <li>• Nha Trang (Khanh Hoa);</li> <li>• Dong Thap (Cao Lanh);</li> <li>• Eastern provinces.</li> </ul>		<ul style="list-style-type: none"> <li>• Nha Trang</li> </ul>
Thanh Ca	<ul style="list-style-type: none"> <li>• Western provinces (An Giang...).</li> </ul>		
Yellow Keo	<ul style="list-style-type: none"> <li>• Cambodia</li> </ul>		<ul style="list-style-type: none"> <li>• Vinh Long</li> </ul>

Source: Weekly mango prices at Thu Duc, Binh Dien, and Long Bien wholesale markets

## **Mango suppliers and main destination at the wholesale markets**

Almost all wholesalers buy mangoes from collectors. In the case of Binh Dien, collectors transport mangoes directly to the market in the midnights; after receiving mangoes, Binh Dien wholesalers will classify mangoes and put these mangoes into carton boxes (15kgs/box, 20kgs/box, and 25kgs/box) to sell in the next morning.

Some Thu Duc wholesalers buy mangoes from farmers and collectors, others only buy mangoes from collectors. However, collectors supply mangoes to Thu Duc in a different way. Collector rent a container truck to transport mangoes from their province to Thu Duc market. After delivering all mangoes to Thu Duc wholesalers, this container truck will be used to transport fruits at Thu Duc market – fruits that their provinces do not have - back to their provinces to sell at local traditional markets. That is probably one of the reasons attracting many collectors to Thu Duc market.

Green mangoes from the southern Vietnam are transported to Long Bien market by trucks (without cold storage). These mangoes are packaged in plastic baskets with small holes and a lid to avoid damaging and over-ripening. Because of long-distance transportation, Cat Hoa Loc mangoes (the premium variety, relatively expensive and difficult to store) are not sold at Long Bien wholesale market. However, Cat Hoa Loc mangoes are still available at Hanoi retailers (e.g. fruit stores, online safe fruit stores).

Vendors and stalls in wet markets are the main buyers in wholesale markets. Thu Duc wholesalers also sell Cat Hoa Loc to retailers such as Coop Mart supermarkets, Coop Food stores, Vinmart convenience stores, and small fruits stores. Binh Dien wholesalers also sell Cat Chu to trade companies, street vendors. Mangoes from Long Bien wholesale market are sold to wet markets in Hanoi and other northern provinces.

In recent years, Vietnamese wholesale markets also sell directly to consumers. Some stalls in these markets open until late mornings and consumers can visit and buy fruits, vegetables, and other products at much cheaper prices than in local wet markets. However, since wholesale markets are quite far from most residential areas, most consumers tend to visit wholesale markets infrequently (only once or twice a week) and store the products in fridge. Sometimes, they buy for several households within their neighborhood.

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## **III. Mangoes prices at the wholesale markets**

### **Monthly prices for the main varieties at the wholesale markets**

This wholesale market monitoring study collected weekly prices of mangoes at the wholesale markets., based on which monthly prices were calculated in order to observe the variations and trend in mango prices during the monitoring period. Price differences among different mango varieties and different wholesale markets can also be observed. Figure 1 illustrates the monthly prices (grade 1) of three main mango varieties – Cat Hoa Loc, Cat Chu, and Cambodian Keo - from March 2020.

Compared to Cat Chu and Cambodian Keo, Cat Hoa Loc has the highest price in the wholesale markets. During the monitoring period, prices of grade 1 Cat Hoa Loc mangoes rose dramatically from about 35,000vnd/kg in March 2020<sup>1</sup> to doubled (even nearly tripled at Thu

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<sup>1</sup> High supply in March (starting the main mango season) and low demand in March 2020 (due to COVID19).

Duc market) in August and September 2020<sup>2</sup>; prices dropped slightly in October 2020<sup>3</sup> and reached the peak (more than 110,000vnd/kg grade 1 Cat Hoa Loc) in December 2020 and January 2021<sup>4</sup>. Prices of grade 1 Cat Hoa Loc mango in 2021 followed a similar trend. However, grade 1 Cat Hoa Loc prices in March 2021 were 31% higher than in March 2020 (46,000 vnd/kg vs 35,000 vnd/kg).

Although Cat Chu's price in the wholesale markets also followed a similar pattern as Cat Hoa Loc's price (lower in-season and higher off-season) the price gap between in-season and off-season grade 1 Cat Chu mangoes was smaller than the gap for Cat Hoa Loc. Compared to Cat Hoa Loc, prices of Cat Chu in the wholesale markets are much lower, being just half or a third of Cat Hoa Loc's price and even a quarter in some off-season months (see *Figure 1*).

Compared to Cat Hoa Loc and Cat Chu, grade 1 Cambodian Keo mango had the lowest prices in the wholesale markets. Prices of Cambodian Keo in southern wholesale markets tend to be stable around 13,000vnd/kg on average. Notably, grade 1 Cambodian Keo price at Long Bien market was much higher than that in Thu Duc and Binh Dien markets (e.g. 39,000vnd/kg vs 9,000vnd/kg in February 2021). In the Long Bien market, Cambodian Keo price was even higher than Cat Chu's price in Binh Dien and Thu Duc markets. Similarly, price of grade 1 Cat Chu in Long Bien market was also higher than that in the southern wholesale markets.

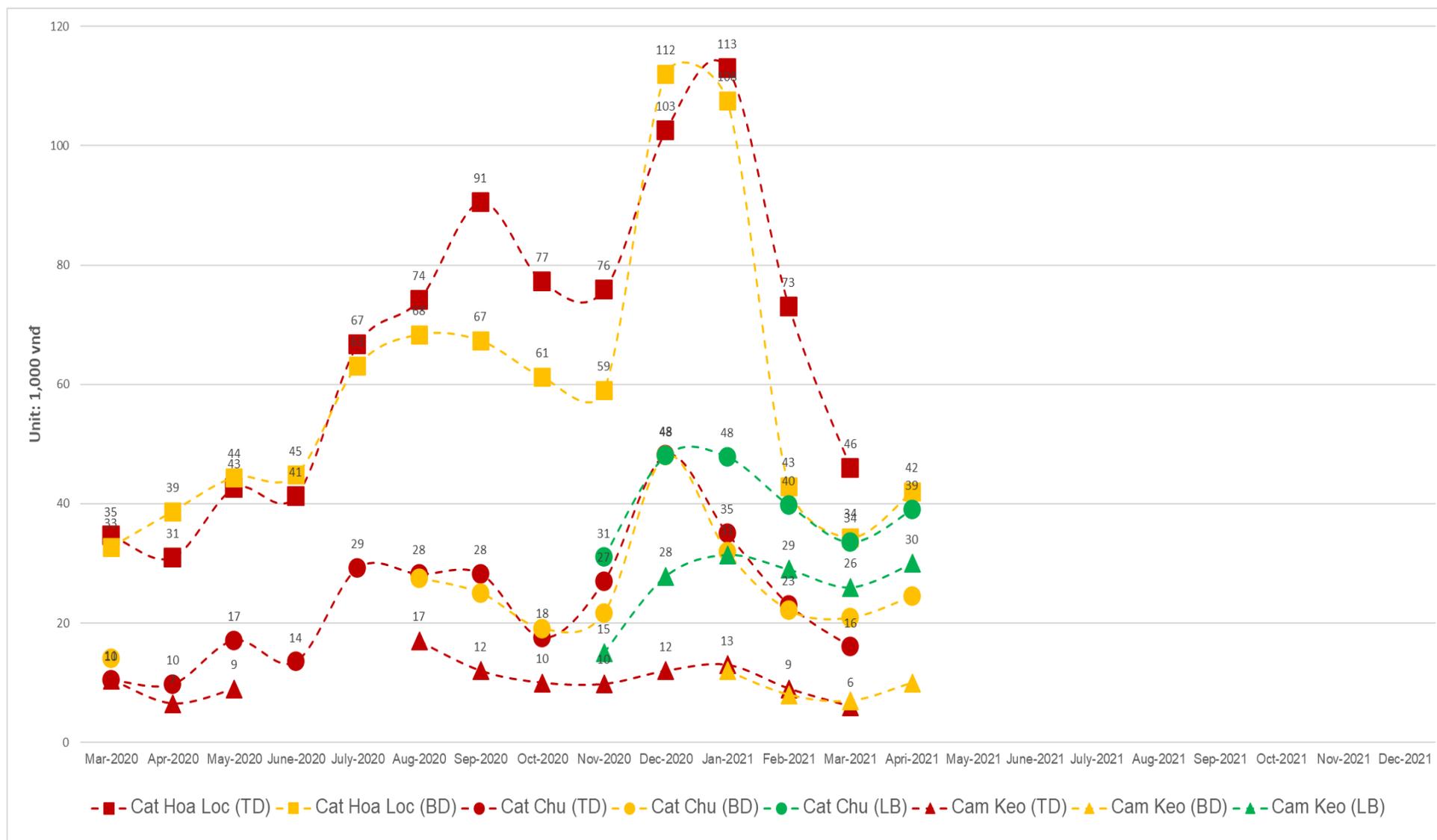
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<sup>2</sup> Mangoes from western provinces came to the season end in late April and early May. The season is over from June until mid-October.

<sup>3</sup> Higher supply starts from late October because of starting of the mango season from western provinces.

<sup>4</sup> There was very low supply of Cat Hoa Loc during December 2020 and January 2021 because of off-season.

**Figure 1: Monthly mango prices (grade 1) at the wholesale markets**



(Source: Weekly mango prices at Thu Duc, Binh Dien, and Long Bien wholesale markets)

## Monthly prices for other varieties at the wholesale markets

[To be completed in the final draft]

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## IV. Conclusions

Based on findings from the wholesale market monitoring study, the following conclusions are drawn regarding mango trading in the wholesale markets; and mango prices in the wholesale markets.

### *Mango trading in the wholesale markets*

- Cat Hoa Loc mango is the most popular variety at the southern wholesale market;
- Compared to Long Bien and Binh Dien, Thu Duc wholesalers sell more mango varieties;
- “Weight” is the main criterion for grading mangoes;
- The majority of Green Keo mangoes are imported directly from Cambodia, and other mango varieties at the three markets are grown domestically;
- The majority of mangoes in the wholesale markets was produced in Cao Lanh, Dong Thap;
- Mangoes at Thu Duc market not only come from western provinces but also eastern provinces and south-central coast provinces;
- The majority of mangoes at Binh Dien market come from western provinces;
- Southern mangoes available at Long Bien market mainly come from Dong Thap (transported to the market by trucks without cold storage);
- Collectors are the main mango suppliers in the wholesale markets;
- Vendors and stalls in wet markets are the main buyers of wholesale markets;
- In recent years, Vietnamese wholesale markets also sell their products directly to consumers.

### *Mango pricing in the wholesale markets*

- Cat Hoa Loc is the premium variety sold at the highest prices;
- Compared to the main season (and shoulder season), mangoes are sold at higher prices in the off-season;
- Mango prices, in general, reach peaks in December and January and bottom in March;
- Compared to other markets, mango suppliers in Thu Duc market come from many provinces making mangoes available at this market almost year-round;
- Because of transportation cost from southern provinces to the north, mango prices at Long Bien market are higher than those in the southern wholesale markets; Long Bien wholesalers do not sell the most premium Cat Hoa Loc variety;
- The effects of COVID19 on Cat Chu and Cambodian Keo prices are higher and longer than on Cat Hoa Loc price;

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## Insights and next steps

This study provided general trading and pricing information in three important wholesale markets of Vietnam. Monitoring weekly wholesale prices of mangoes from southern Vietnam – especially the Cat Hoa Loc and Cat Chu variety – is crucial to understand the market supply and demand dynamics of Vietnamese domestic mangoes

### Key insights

This study finds that Cat Hoa Loc mango is the premium variety that is sold at the highest price, most popular in the southern wholesale markets (highest supply and highest demand), and least affected by COVID19. It means compared to other varieties, Cat Hoa Loc mango has a lot of potential for further development in the domestic market in the future. However, this study found that Cat Hoa Loc mango was not sold at Long Bien wholesale market. Therefore, it is necessary to conduct a study to examine the demand, willingness to pay, and potential of this variety in the northern markets, in order to further develop southern Vietnam mango production.

[more to be completed in the final report.]

### Next steps:

The Project team can use the pricing information from this study to:

- Apply cost and benefit analysis to evaluate the revenue gain from interventions that improve mango quality, change variety, or manipulate flowering time;
- Share mango pricing information to stakeholders in the value chain so that they can make informed decisions based on the spatial and temporal dynamics in mango prices;

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## References

Binh Dien Market. (2020, 9 3). *Binh Dien Market*. Retrieved from Introduction:

<http://www.binhdienmarket.com.vn/gioi-thieu/tong-quan-hoat-dong/trai-cay>

General Statistics Office of Vietnam. (2020, 9 2). *General Statistics Office of Vietnam*. Retrieved from Statistics: <https://www.gso.gov.vn/default.aspx?tabid=714>

Long Bien Market Management Unit. (2020, October). Collecting general information of wholesale markets. (SCAP, Interviewer)

Thu Duc Agro Market. (2020, September 3). *Thu Duc Agro Market*. Retrieved from Introduction: <https://thuducagromarket.com/gioi-thieu/>

## Appendix 1: Checklist for collecting general information of wholesale markets

Location:                    A. Ho Chi Minh City;                    B. Hanoi;                    C. Dong Thap

Wholesale market name: .....

Respondent name: ..... Position: .....

Contact number: ..... Email: .....

Currently, the market has ..... wholesalers/stalls; in which, there are ..... fruit wholesalers, and among them, there are ..... MANGO wholesalers.

### I. Types of mangoes could be available in the wholesale market (Multiple):

#### 1. Domestic grown mango varieties

Variety	Available in the market	Production origin (provinces/location)
Cat Hoa Loc	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Cat Chu	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Keo mango (grown in VN)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Tu Quy	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Taiwanese mango (grown in VN)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Thai mango (grown in VN)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Tượng Mango	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Thanh Ca	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Australian Mango (grown in VN)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Other (1): .....		
Other (2): .....		
Other (3): .....		

**2. Imported mango varieties**

Variety	Available in the market	Production Origin (Country/ Countries)
Keo mango (imported)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Australian Mango (imported)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Taiwanese mango (imported)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Thai mango (imported)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Other (1): .....		
Other (2): .....		
Other (3): .....		

**II. Mango seasonality in the wholesale markets:**

**1. Seasons of domestically grown mango** (note: for mango varieties do not available in the wholesale markets, move to the next variety) **CODE: P (peak season); S (shoulder season); N (not available).**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cat Hoa Loc												
Cat Chu												
Keo mango (grown in VN)												
Tu Quy												
Taiwanese mango												
Thai mango												
Tượng Mango												
Thanh Ca												
Australian Mango (grown in VN)												
Other (1):.....												
Other (2):.....												
Other (3):.....												

**2. Imported mango varieties** (note: for mango varieties do not available in the wholesale markets, move to the next variety) **CODE: A (available); N (not available)**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Keo mango (imported)												
Australian Mango (imported)												
Taiwanese mango (imported)												
Thai mango (imported)												
Other (1):.....												
Other (2):.....												
Other (3):.....												

**III. Types of information could be collected and their sources:**

Information	Frequency	Sources
Prices	- Daily <input type="checkbox"/> - Weekly <input type="checkbox"/> - Monthly <input type="checkbox"/>	- Market Management Unit (MMU) <input type="checkbox"/> - Only from Wholesalers <input type="checkbox"/> - From both the MMU and Wholesalers <input type="checkbox"/> - From other sources: ..... <input type="checkbox"/>
Volume	- Daily <input type="checkbox"/> - Weekly <input type="checkbox"/> - Monthly <input type="checkbox"/>	- Market Management Unit (MMU) <input type="checkbox"/> - Only from Wholesalers <input type="checkbox"/> - From both the MMU and Wholesalers <input type="checkbox"/> - From other sources: ..... <input type="checkbox"/>
Product origin for each variety		- Market Management Unit (MMU) <input type="checkbox"/> - Only from Wholesalers <input type="checkbox"/> - From both the MMU and Wholesalers <input type="checkbox"/> - From other sources: ..... <input type="checkbox"/>
Destination for each variety		- Market Management Unit (MMU) <input type="checkbox"/> - Only from Wholesalers <input type="checkbox"/> - From both the MMU and Wholesalers <input type="checkbox"/> - From other sources: ..... <input type="checkbox"/>

**IV. If we have to PURCHASE the data from the MMU or wholesalers, how much could be the cost for the data?**

.....

.....

.....

**V. What could be the appropriate communication protocol between us and the respondent to collect the data (email with our form/direct access to their system/phone call...)**

.....

.....

**VI. In terms of the price data, could we collect the mango prices by Grades? If possible, what are the grading specifications?**

**1. Domestic grown mango varieties**

Variety <i>(based on answers in section I -- write down all domestic grown mango varieties)</i>	Check (x) if YES	Grading specification		
		Grade I	Grade II	Grade III

**2. Imported mango varieties**

Variety <i>(based on answers in section I -- write down all imported mango varieties)</i>	Check (x) if YES	Grading specification		
		Grade I	Grade II	Grade III

**VII. Detailed discussion about weekly collecting data from wholesalers of the market**

.....  
 .....

**VIII. In terms of this ACIAR project, we will disseminate the mango market information to a diverse range of stakeholders, Would the MMU want to be a receiver and a channel for information dissemination? (For example: post the report on the markets' website, fan page...)**

.....  
 .....

**THANK YOU SO MUCH FOR YOUR PRECIOUS TIME AND INFORMATION**

## Appendix 2: Checklist for weekly collecting wholesale market information

Date:

Name of researcher: ..... Researcher ID:

Wholesaler name: ..... Wholesaler ID:

Location:  A. Thu Duc; B. Binh Dien; C. Long Bien; D. My Hiep

**I. Please estimate the total volume of mangoes purchased last week?**

Tonnes

MANGOES; accounted for  % of total volume purchased last week.

**II. Please estimate the average prices of mangoes sold in last week**

**1. Domestic grown mango varieties**

Mango varieties	Average prices (1,000 VND/Kg)				Place of production <sup>5</sup>	Types of supplier(s) <sup>6</sup>	Main destination <sup>7</sup>	Estm %	Note
	Gr I	Gr II	Gr III	Mixed					
Cat Hoa Loc									
Cat Chu									
Keo mango (grown in VN)									
Tu Quy									
Taiwanese mango (grown in VN)									
Thai mango (grown in VN)									
Tượng Mango									
Thanh Ca									
Australian Mango (grown in VN)									
Other (1): .....									

<sup>5</sup> MONTHLY COLLECTED (provinces, region)

<sup>6</sup> MONTHLY COLLECTED (farmers, pack house, AC, FG, trader, collector)

<sup>7</sup> MONTHLY COLLECTED (stalls in wet market, retailers, schools...)

Other (2): .....									
Other (3): .....									

**2. Imported mango varieties**

Mango varieties	Average prices (1,000 VND/Kg)			Place of production <sup>8</sup>	Types of supplier(s) <sup>9</sup>	Main destinations <sup>10</sup>	Estimated % from total purchase
	Gr I	Gr II	Mixed				
Keo mango (imported)							
Australian Mango (imported)							
Taiwanese mango (imported)							
Thai mango (imported)							
Other (1): .....							
Other (2): .....							
Other (3): .....							

**III. General information about supply/demand<sup>11</sup>**

**1. Please tell us some remarks on general mango supply/demand in the LAST TWO week? and the reasons for that?**

- **Supply:** .....
- .....
- **Demand:** .....
- .....

**2. Please tell us your opinion on general mango supply/demand in the NEXT TWO weeks? and the reasons for that?**

- **Supply:** .....
- .....
- **Demand:** .....
- .....

**THANK YOU SO MUCH FOR YOUR PRECIOUS TIME AND INFORMATION**

<sup>8</sup> MONTHLY COLLECTED (country/ countries)

<sup>9</sup> MONTHLY COLLECTED (exporter/ trader/ other)

<sup>10</sup> MONTHLY COLLECTED (fruit store, supermarket, restaurants...)

<sup>11</sup> FORTNIGHT COLLECTED

## Appendix 3: Mango supply and demand in the wholesale market

MONTH	Time	Remarks of mango supply and demand	
		Thu Duc market	Binh Dien market
<b>IN 2020</b>			
<b>MARCH</b>	16-Mar	Low demand - affected by COVID19; High supply - mango main season is starting;	-
	23-Mar	Demand rose in the 2 worship days.	Low demand - affected by COVID19; On Saturday and Sunday (21th-22th, March), people buy more mangoes for the worship days
	30-Mar	Low supply & demand – affected by COVID19	-
<b>APRIL</b>	6-April	Collectors can't export mangoes to China because of Cov19, they bring mangoes to the wholesale market (Thu Duc) leading to mango prices reduce dramatically.	More supply during 2 worship days; Low demand – affected by COVID19; Cheaper price – can not export to China because of COVID19 (Vietnam closed the border gate with China in several days).
	13-April	In 2 worship days: higher demand and supply; After worship days: low demand and low supply (affected by COVID19).	-
	20-April	-	Low supply – end of mango season; Higher demand (50%-60%).
	27-April	Mangoes from western provinces come to end the season; Wholesalers buy mangoes from eastern provinces instead; The better situation of the nCov19. Still low demand.	-
<b>MAY</b>	4-May		Higher price - the end of mango season (lower supply); Mango quality is not good like in the season.

	11-May	End of mango season from western provinces; More supply from eastern provinces and Nha Trang; Low demand: mangosteen, bonbon, durian, rambutan, and Hanoi litchi are in season	-
	18-May	-	Lower demand - bonbon, mangosteen, rambutan, lychee are in season (people want to eat new fruits over a long season); Low supply – the end of mango season.
	25-May	Mango supply from eastern provinces; Low mango supply from western provinces; End season of Keo mango	-
<b>JUNE</b>	1-June	-	Demand for Vietnam mangoes is lower than Cambodian mangoes; Low supply – the end of mango season; Cheaper price since low mango demand – bonbon, mangosteen, rambutan, lychee are in the season
	8-June	Cat mango from Nha Trang province is more than western provinces; End of Keo mango season.	-
	15-June	-	Low demand - People eat seasonal fruits (the mango season is over); Low supply – higher price.
	22-June	Mango season from western provinces is over; Mango supply from Nha Trang and eastern provinces	-
	29-June	-	Low supply – higher price; Low demand – people eat seasonal fruits; Fruits in western provinces sell slowly, bonbon and mangosteen from Thailand sell more; High demand in Mid-Year-Festival (25-June)
<b>JULY</b>	6-July	Low supply and low demand	-

	13-July	-	The mango season in Western provinces is over; The end of Keo mango season; High price - very low supply.
	20-July	More mango from Western provinces and less mango from eastern provinces; End season of Cat Chu mango.	-
	27-July	-	Very low supply - high price; Low demand.
<b>AUGUST</b>	10-August	-	Low supply - mango season is over; Low demand - raining season, COVID19 come back to Vietnam.
	17-August	Cambodia mango season is over; Worship days: slightly higher supply.	-
	24-August 31-August	Low supply – higher price.	Low supply and higher price - mango season is over
<b>SEPTEMBER</b>	7-September	-	-
	14-September	-	Mango season is over; Mango is not eye-catching, not delicious; Low supply and low demand.
	21-September	-	-
	28-September	-	Low demand – COVID19 (workers were fired); students go to school.
<b>OCTOBER</b>	5-October	-	-
	12-October	-	Low demand – storm (raining every night), fewer people visit the market; Low supply - suppliers hesitate to supply mango because of storms
	19-October	-	-

	26-October	Nha Trang mango season is over; Start of mango season from western provinces: higher supply from western provinces.	Higher supply – the start of the mango season Higher demand – better weather.	
<b>NOVEMBER</b>	2-November	-	-	
	9-November	Lower supply and lower demand (storms)	Low supply – stormy nights, suppliers hesitate to supply; Low demand.	
	16-November	-	-	
	23-November	Lower supply of Cat Hoa Loc mango; Higher supply of Cat Chu mango.	End of mango season; The volume of mangoes this year is very low.	
	30-November	-	-	
<b>DECEMBER</b>	7-December	-	Low supply, higher price - end of mango season; Low demand – COVID19 comes back to Vietnam.	
	14-December	-	-	
	21-December	Low supply, higher price: the mango season is over; Demand exceeds supply	Low supply, higher price: mango season is over	
<b>MONTH</b>	<b>Time</b>	<b>Remarks of mango supply and demand</b>		
		<b>Thu Duc market</b>	<b>Binh Dien market</b>	<b>Long Bien market</b>
<b>IN 2021</b>				
<b>JANUARY</b>	4-January			
	11-January			
	18-January			
	25-January			
<b>FEBRUARY</b>	1-February			
	8-February			

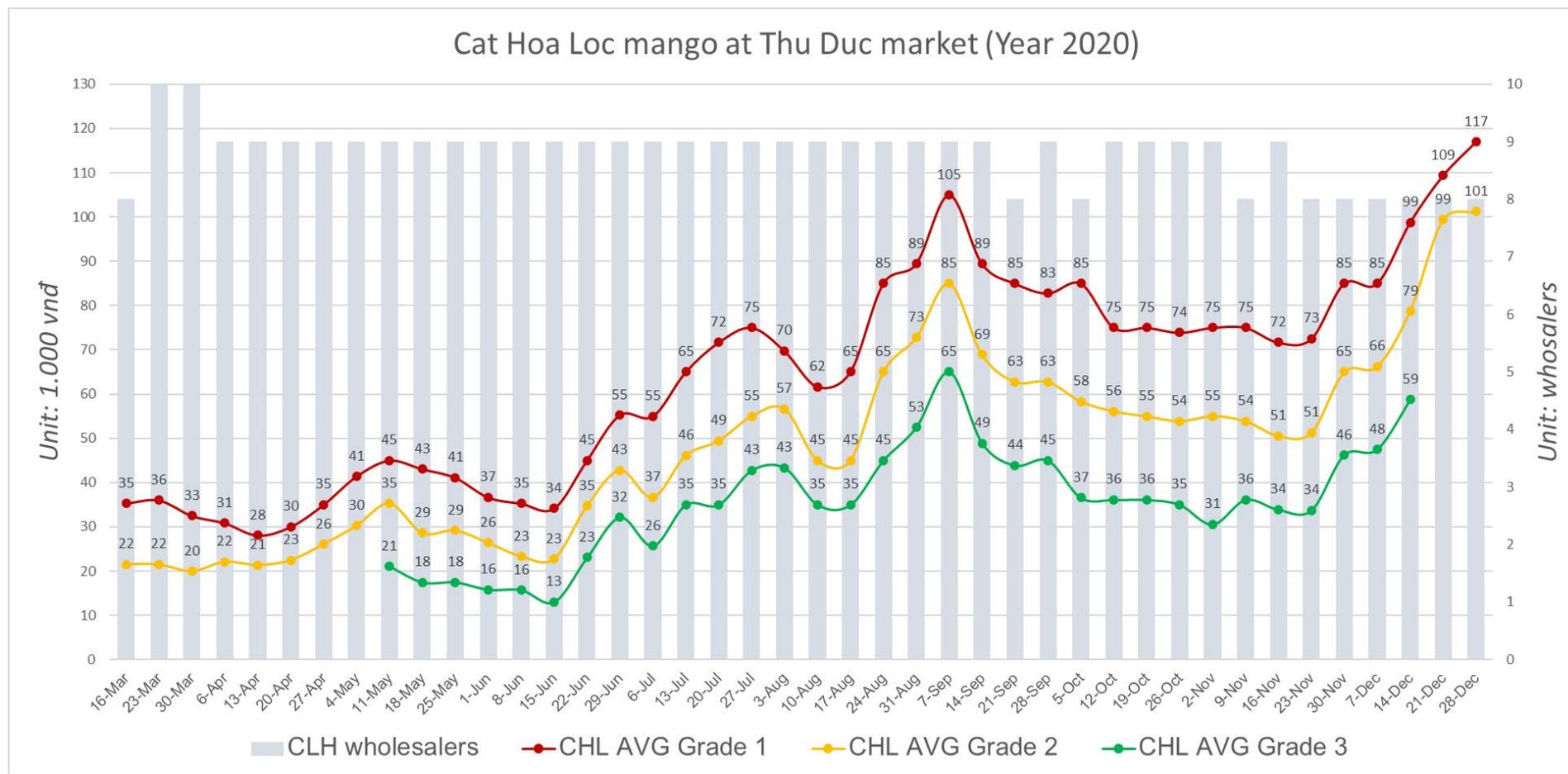
	15-February			
	22-February			
<b>MARCH</b>	1-March			
	8-March			
	15-March			
	22-March			
	29-March			
<b>APRIL</b>	5-April			
	12-April			
	19-April			
	26-April			
<b>MAY</b>	3-May			
	10-May			
	17-May			
	24-May			
	31-May			
<b>JUNE</b>	7-June			
	14-June			
	21-June			
	28-June			
<b>JULY</b>	5-July			
	12-July			
	19-July			
	26-July			

<b>AUGUST</b>	2-August			
	9-August			
	16-August			
	23-August			
	30-August			
<b>SEPTEMBER</b>	6-September			
	13-September			
	20-September			
	27-September			
<b>OCTOBER</b>	4-October			
	11-October			
	18-October			
	25-October			
<b>NOVEMBER</b>	1-November			
	8-November			
	15-November			
	22-November			
	29-November			
<b>DECEMBER</b>	6-December			
	13-December			
	20-December			
	27-December			

## Appendix 4: Weekly mango prices at Thu Duc wholesale market

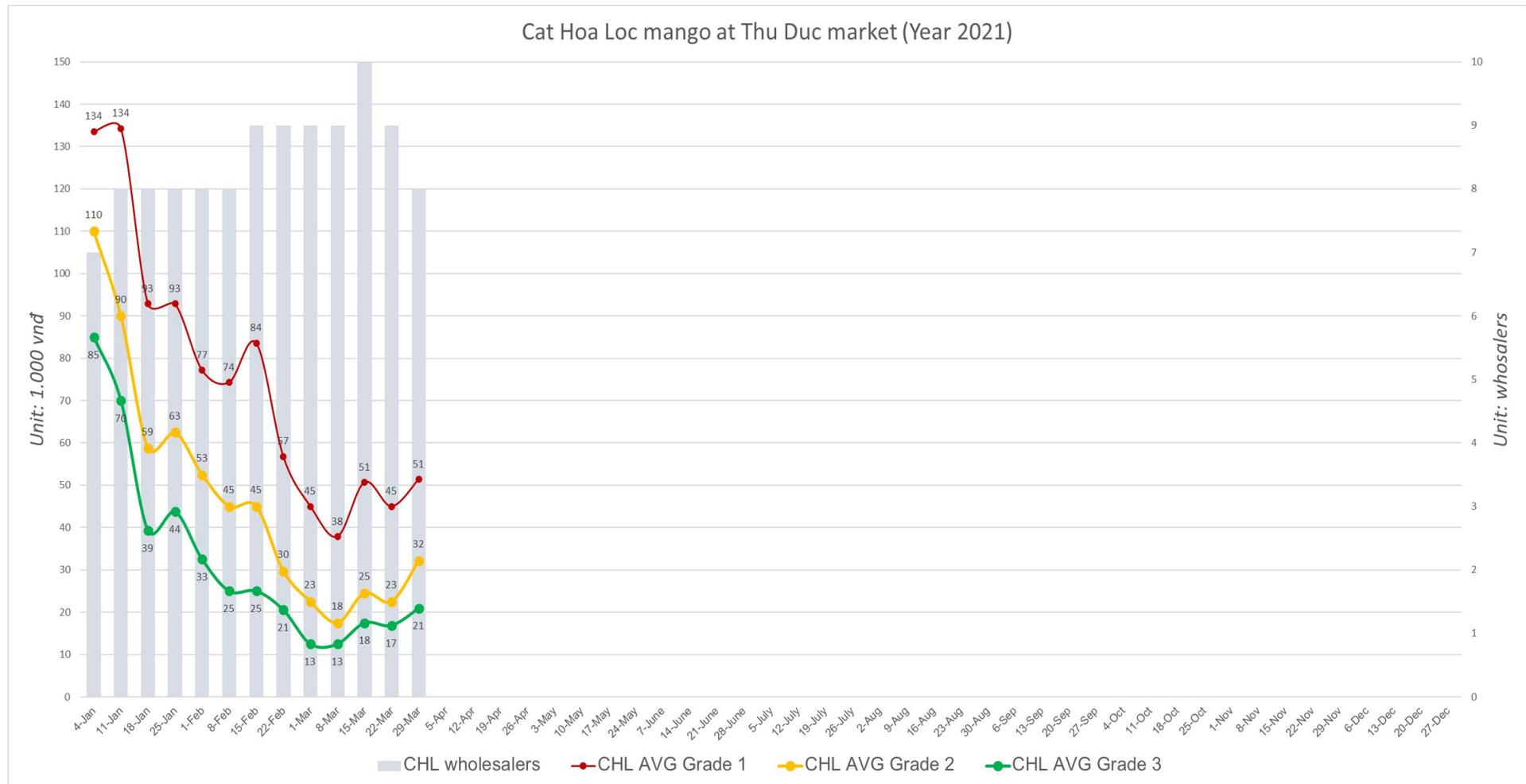
### 4.1. Weekly prices of Cat Hoa Loc mango at Thu Duc market

Figure 4.1.1: Weekly mango prices of Cat Hoa Loc mango in 2020



(Source: Weekly mango prices at Thu Duc wholesale market)

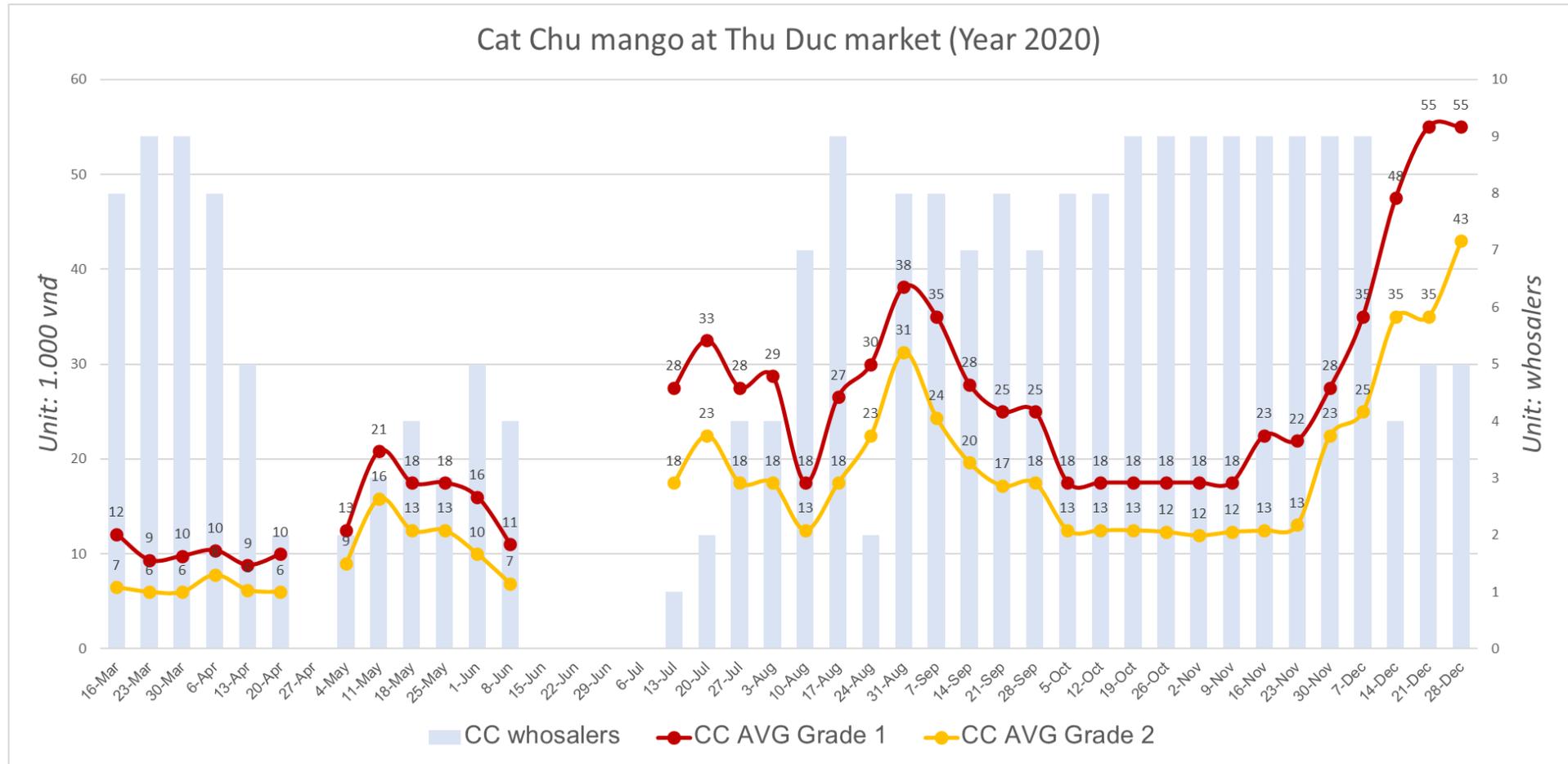
**Figure 4.1.2: Weekly mango prices of Cat Hoa Loc mango in 2021**



(Source: Weekly mango prices at Thu Duc wholesale market)

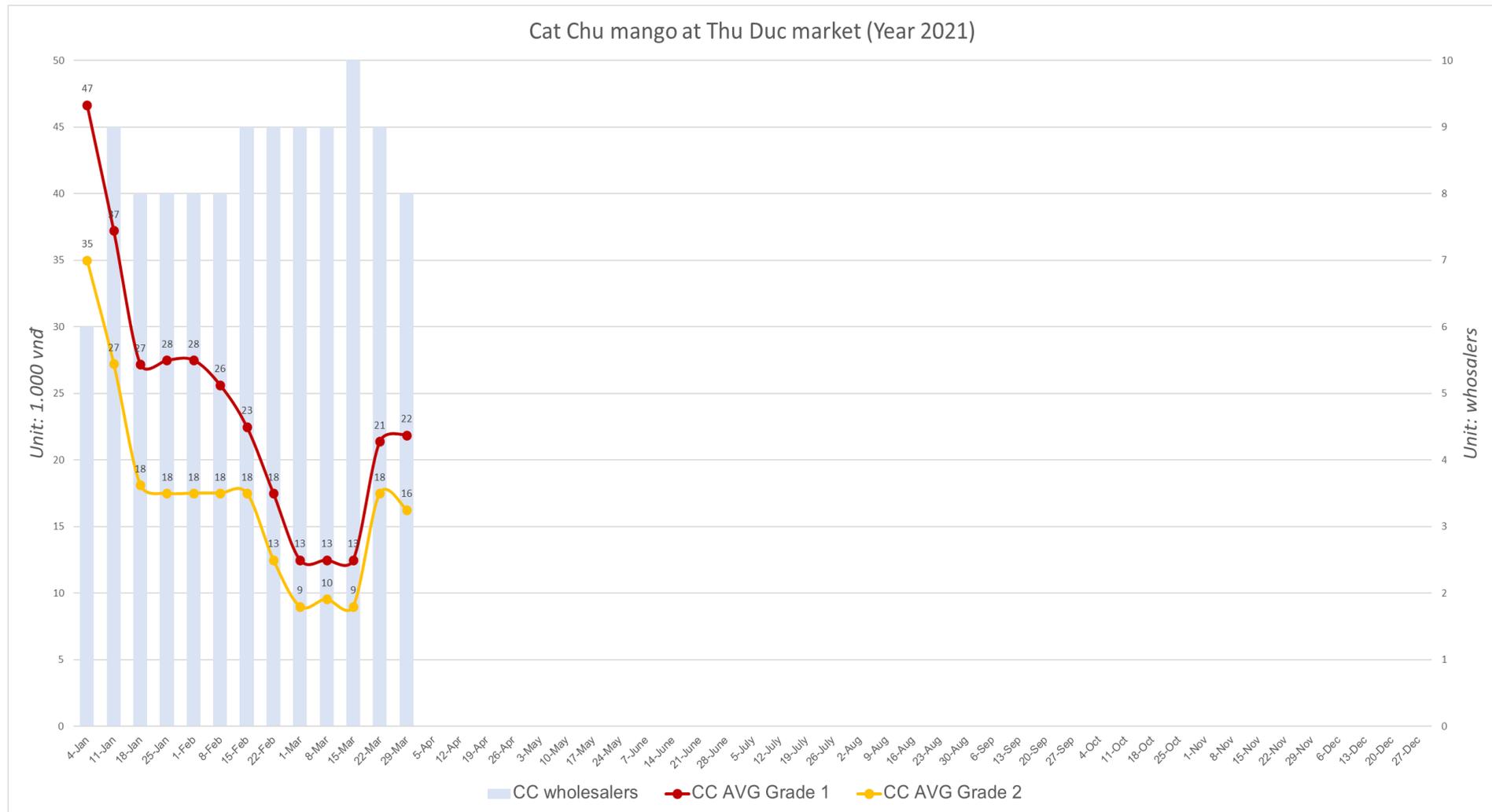
## 4.2. Weekly prices of Cat Chu mango at Thu Duc market

Figure 4.2.1: Weekly mango prices of Cat Chu mango in 2020



(Source: Weekly mango prices at Thu Duc wholesale market)

**Figure 4.2.2: Weekly mango prices of Cat Chu mango in 2021**



(Source: Weekly mango prices at Thu Duc wholesale market)

### 4.3. Weekly prices of Cambodian Keo mango at Thu Duc market

Figure 4.3.1: Weekly mango prices of Cambodian Keo mango in 2020

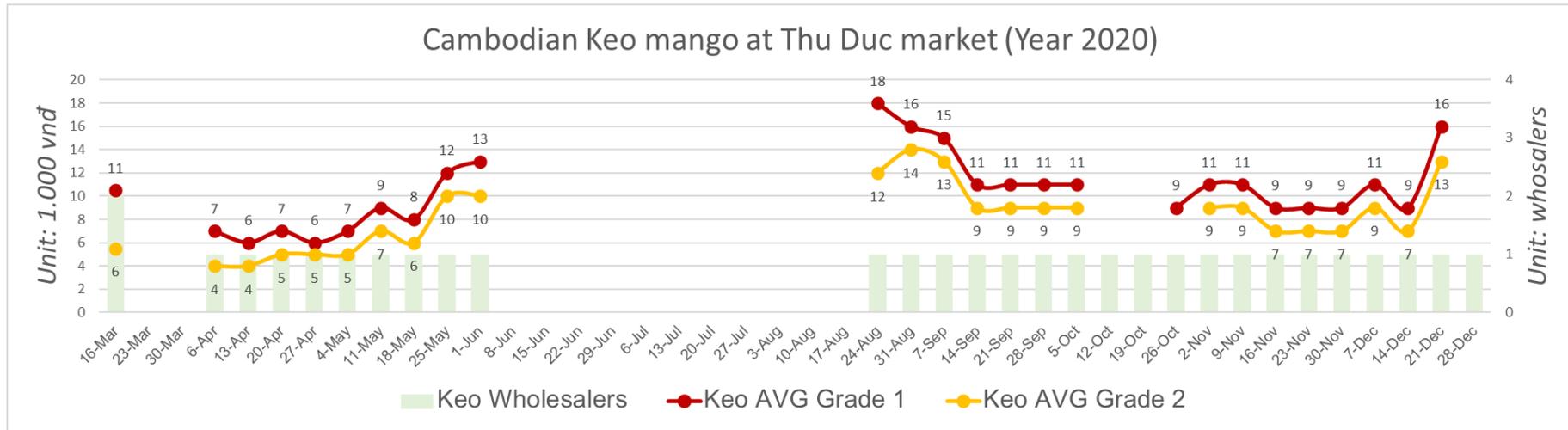
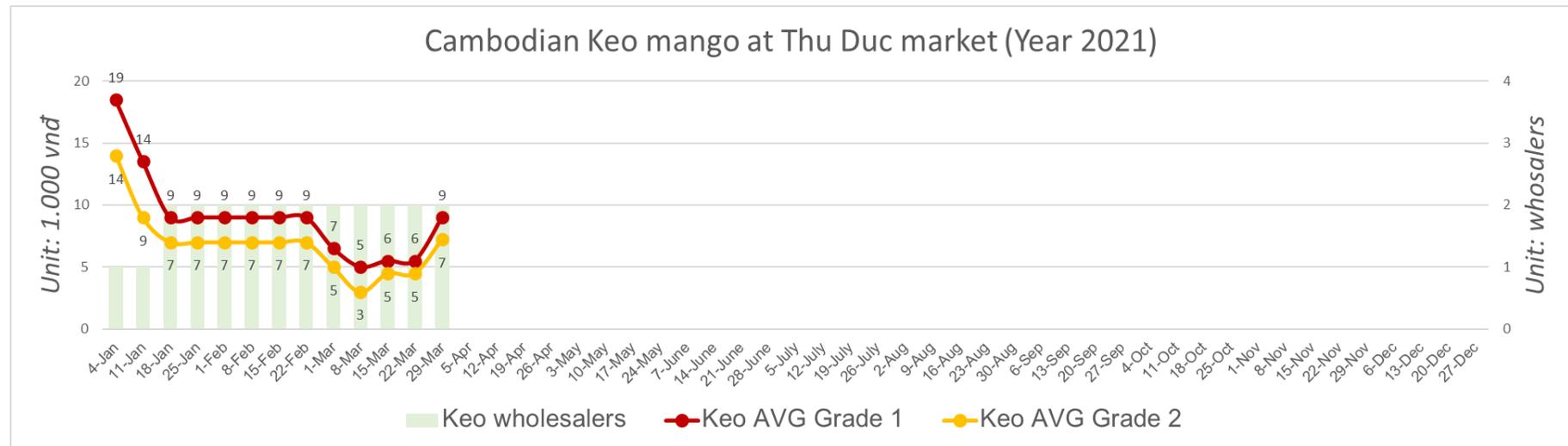


Figure 4.3.2: Weekly mango prices of Cambodian Keo mango in 2021



(Source: Weekly mango prices at Thu Duc wholesale market)

## 4.4. Weekly prices of Thai mango and Australian mango at Thu Duc market

Figure 4.4.1: Weekly mango prices of Thai mango in 2021

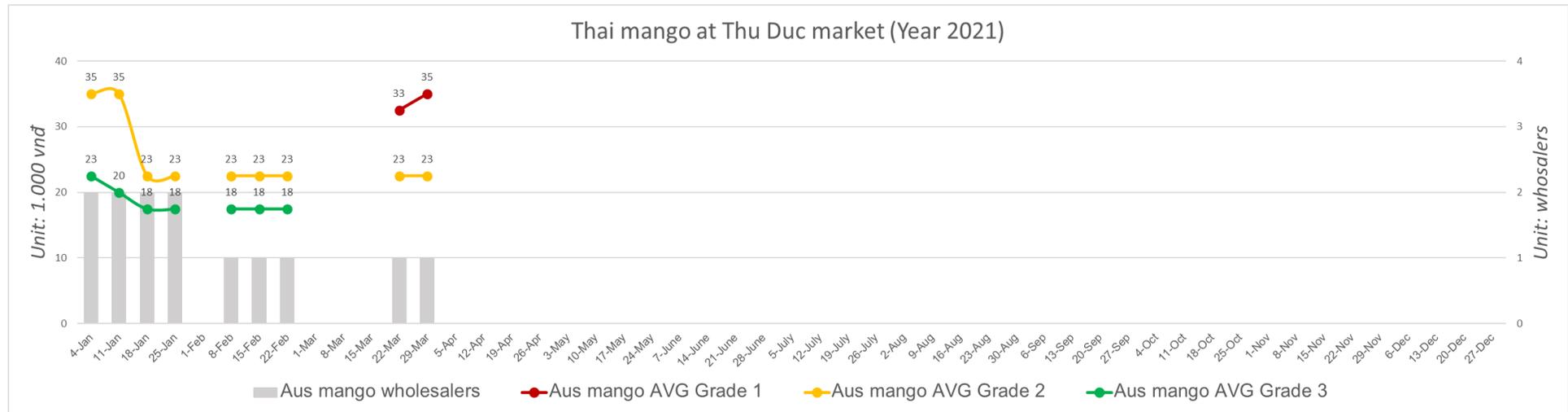
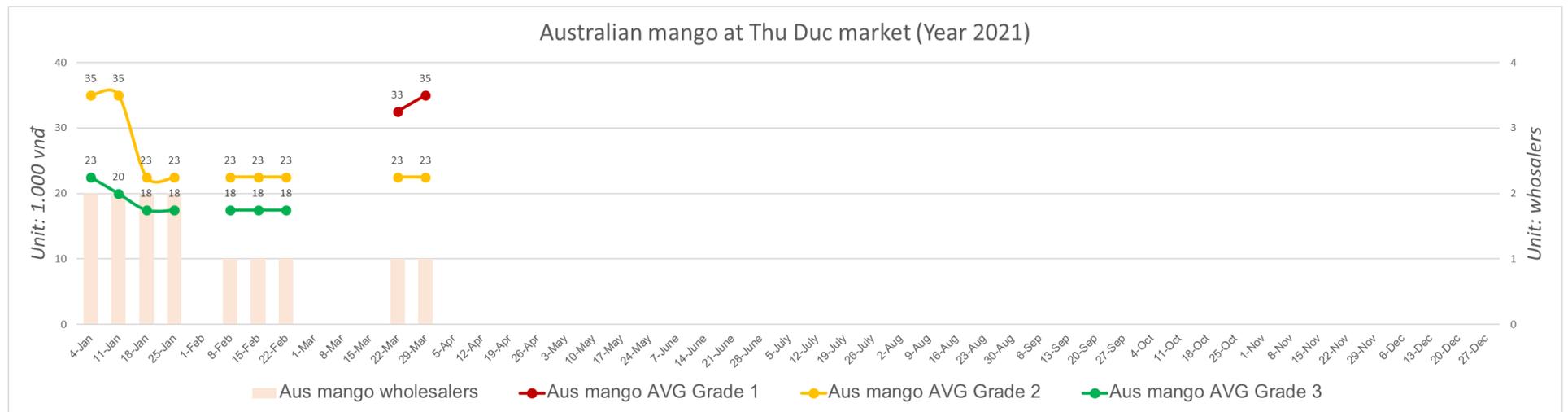


Figure 4.4.2: Weekly mango prices of Australian mango in 2021

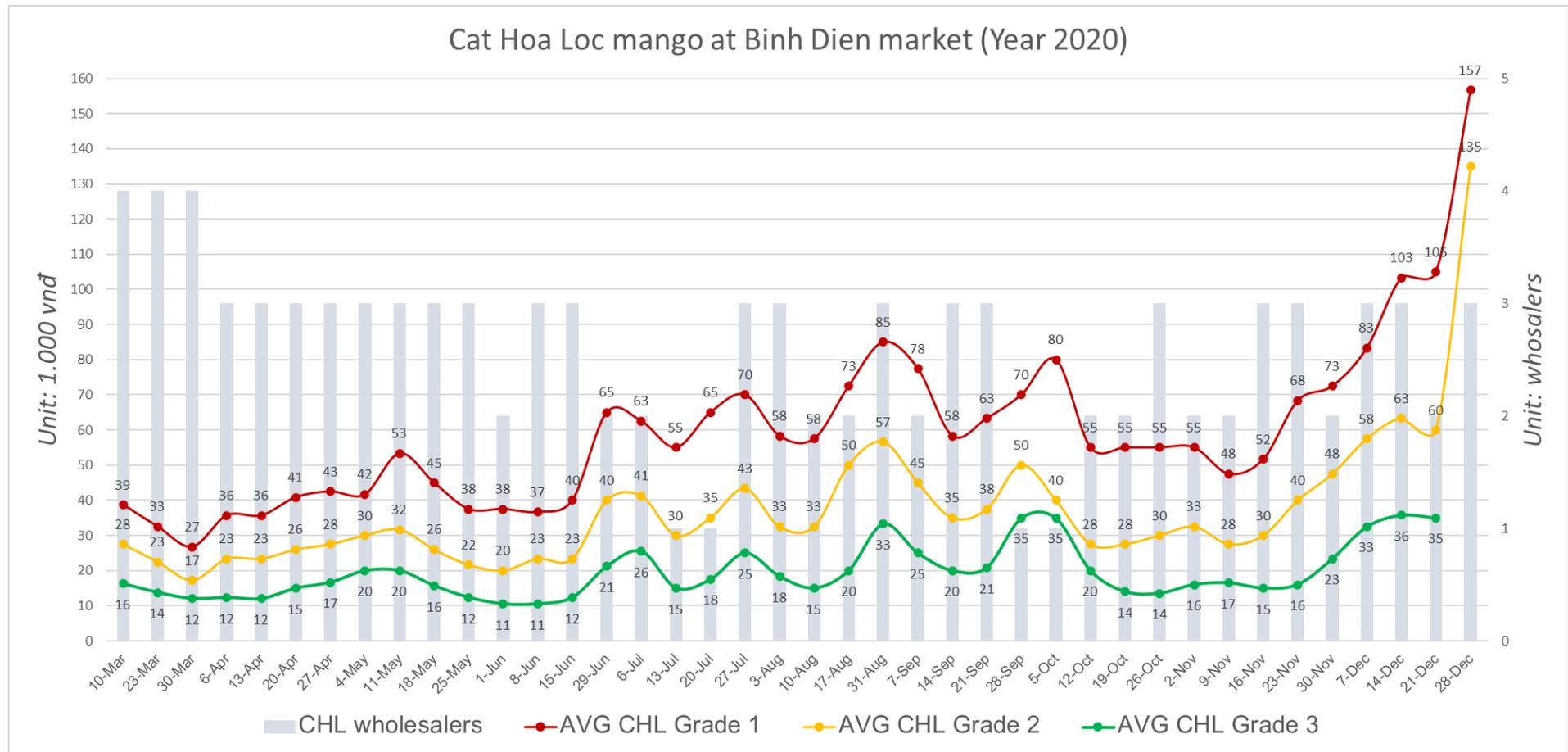


(Source: Weekly mango prices at Thu Duc wholesale market)

## Appendix 5: Weekly mango prices at Binh Dien wholesale market

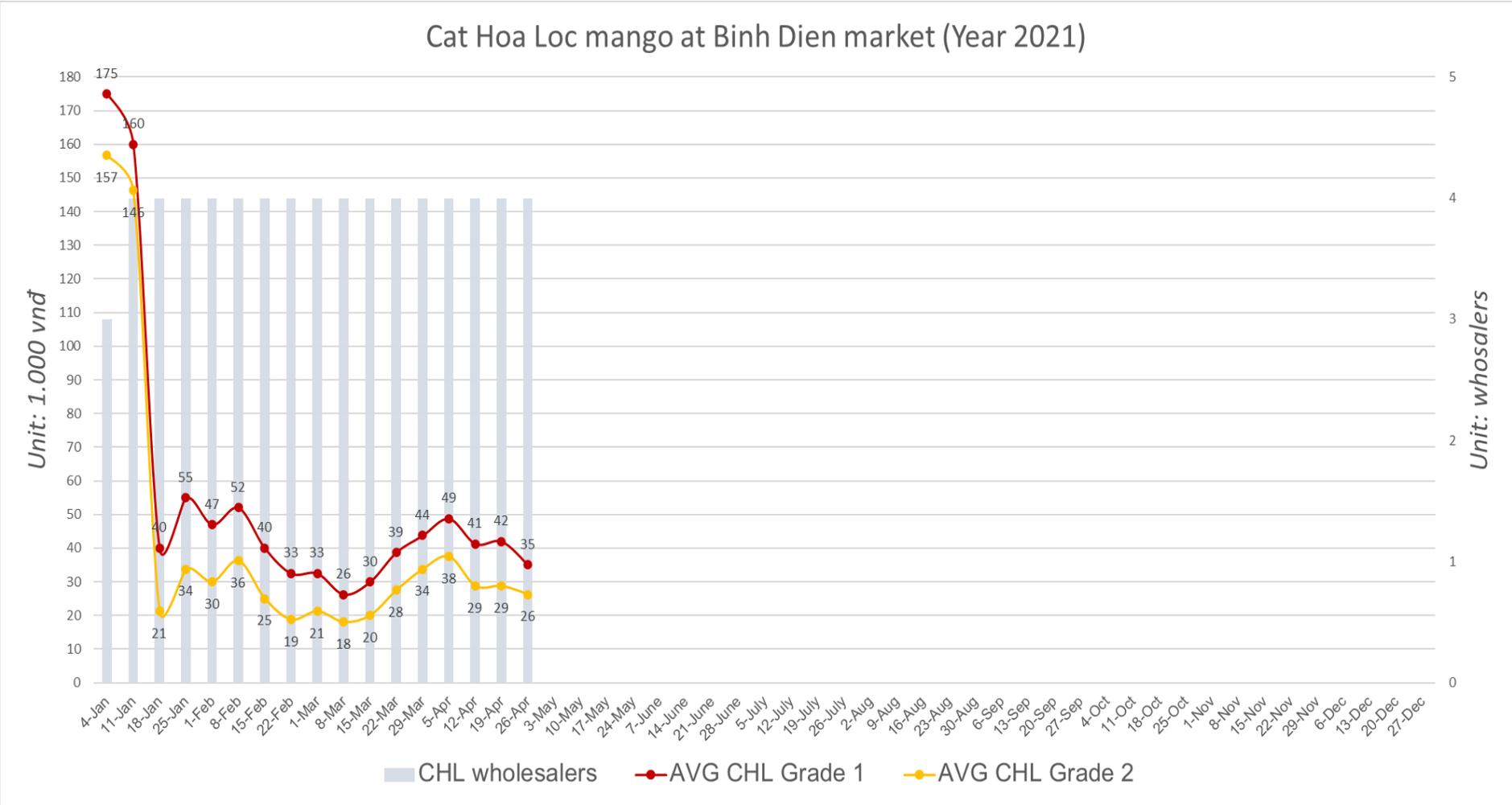
### 5.1. Weekly prices of Cat Hoa Loc mango at Binh Dien market

Figure 5.1.1. Weekly mango prices of Cat Hoa Loc mango in 2020



(Source: Weekly mango prices at Binh Dien wholesale market)

Figure 5.1.2. Weekly mango prices of Cat Hoa Loc mango in 2021



(Source: Weekly mango prices at Binh Dien wholesale market)

## 5.2. Weekly prices of Cat Chu mango at Binh Dien market

Figure 5.2.1. Weekly mango prices of Cat Chu mango in 2020

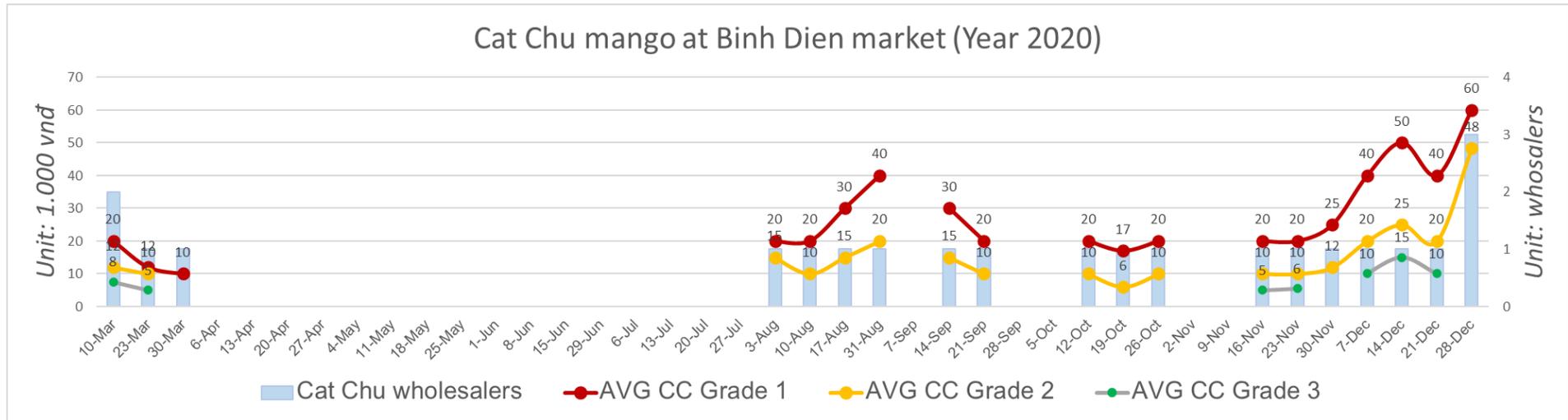
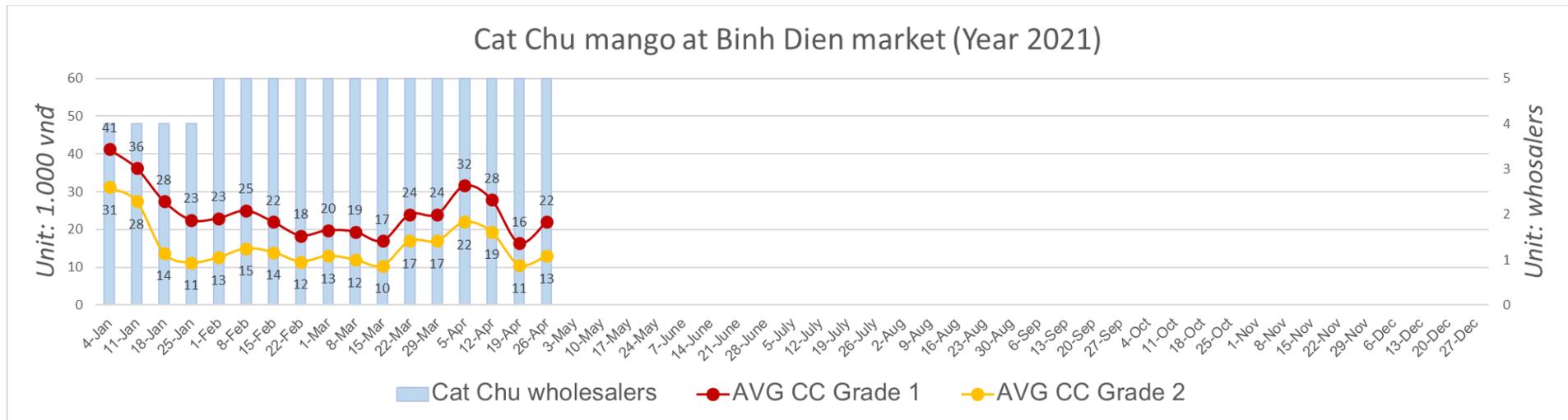


Figure 5.2.2. Weekly mango prices of Cat Chu mango in 2021



(Source: Weekly mango prices at Binh Dien wholesale market)

### 5.3. Weekly prices of Taiwanese mango at Binh Dien market

Figure 5.3.1. Weekly mango prices of Taiwanese mango in 2020

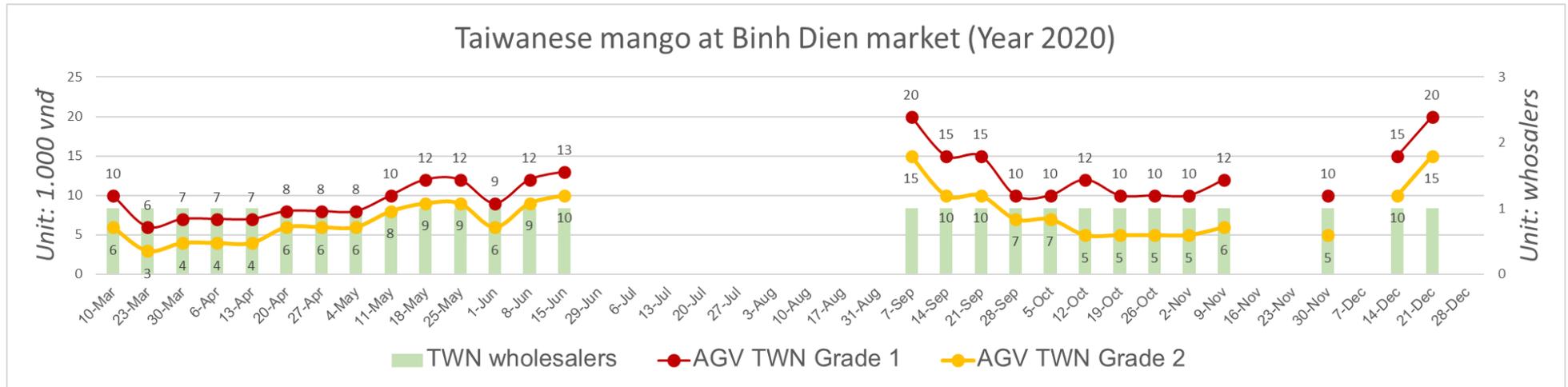
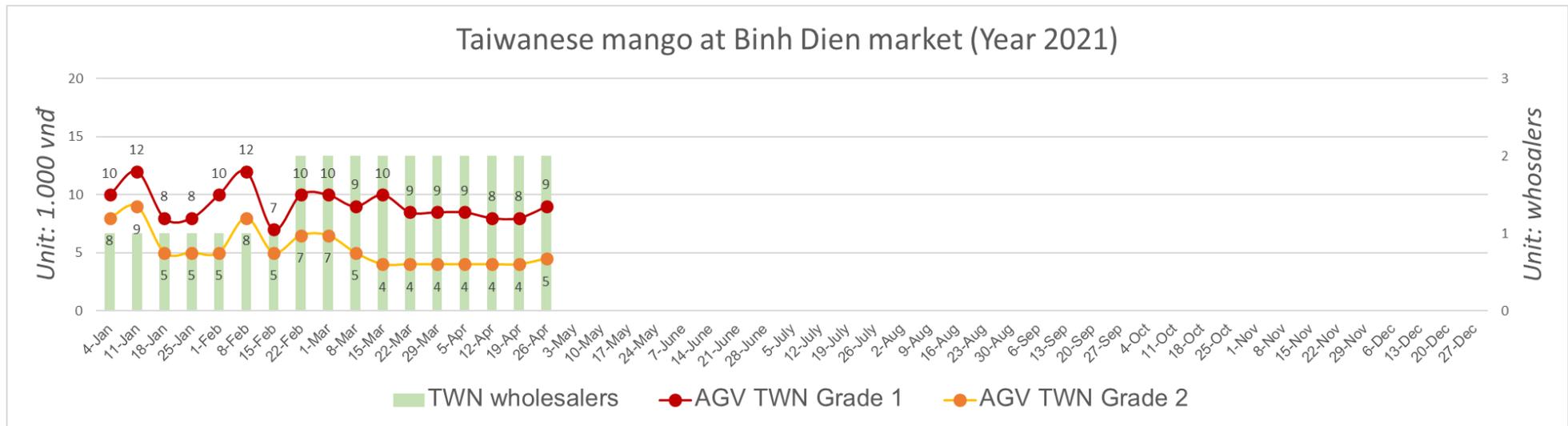


Figure 5.3.2. Weekly mango prices of Taiwanese mango in 2021



(Source: Weekly mango prices at Binh Dien wholesale market)

## 5.4. Weekly prices of Keo mango at Binh Dien market

Figure 5.4.1. Weekly mango prices of Cambodian Keo mango in 2021

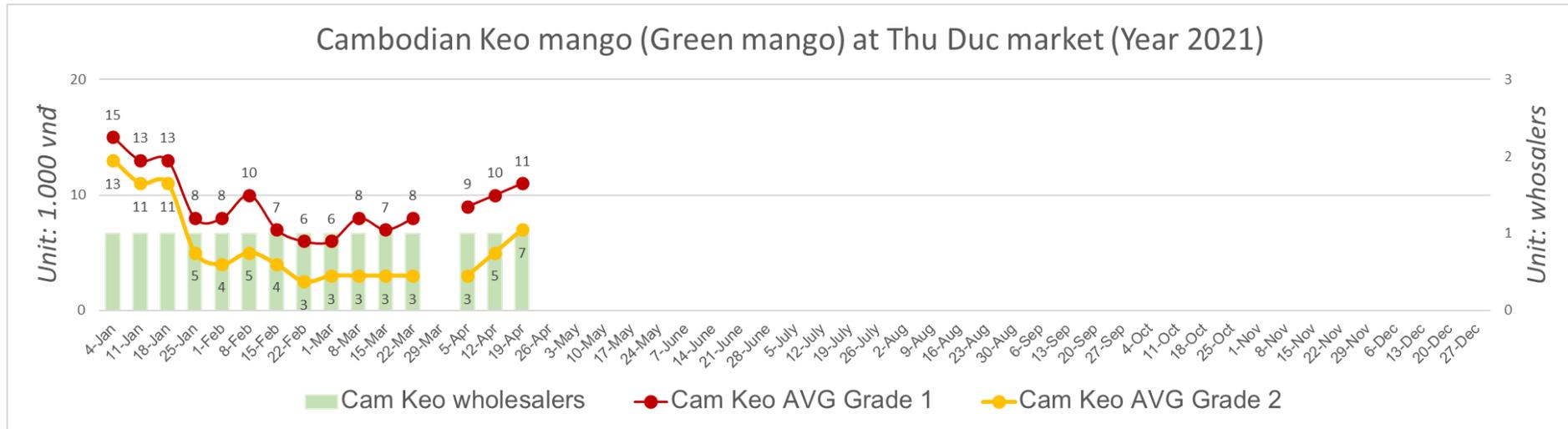
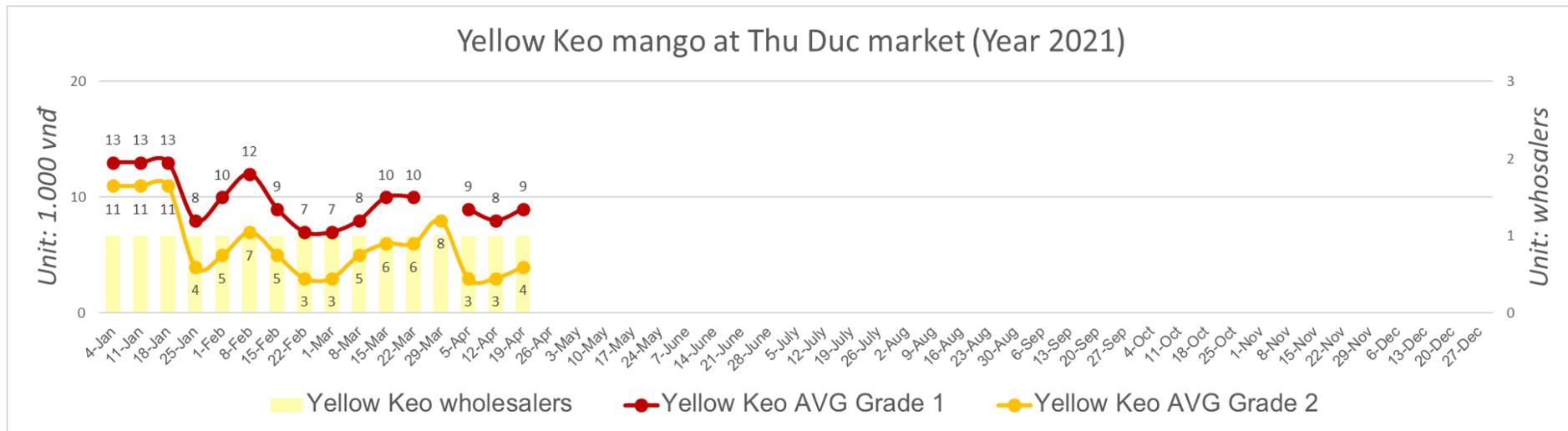


Figure 5.4.2. Weekly mango prices of Yellow Keo mango in 2021

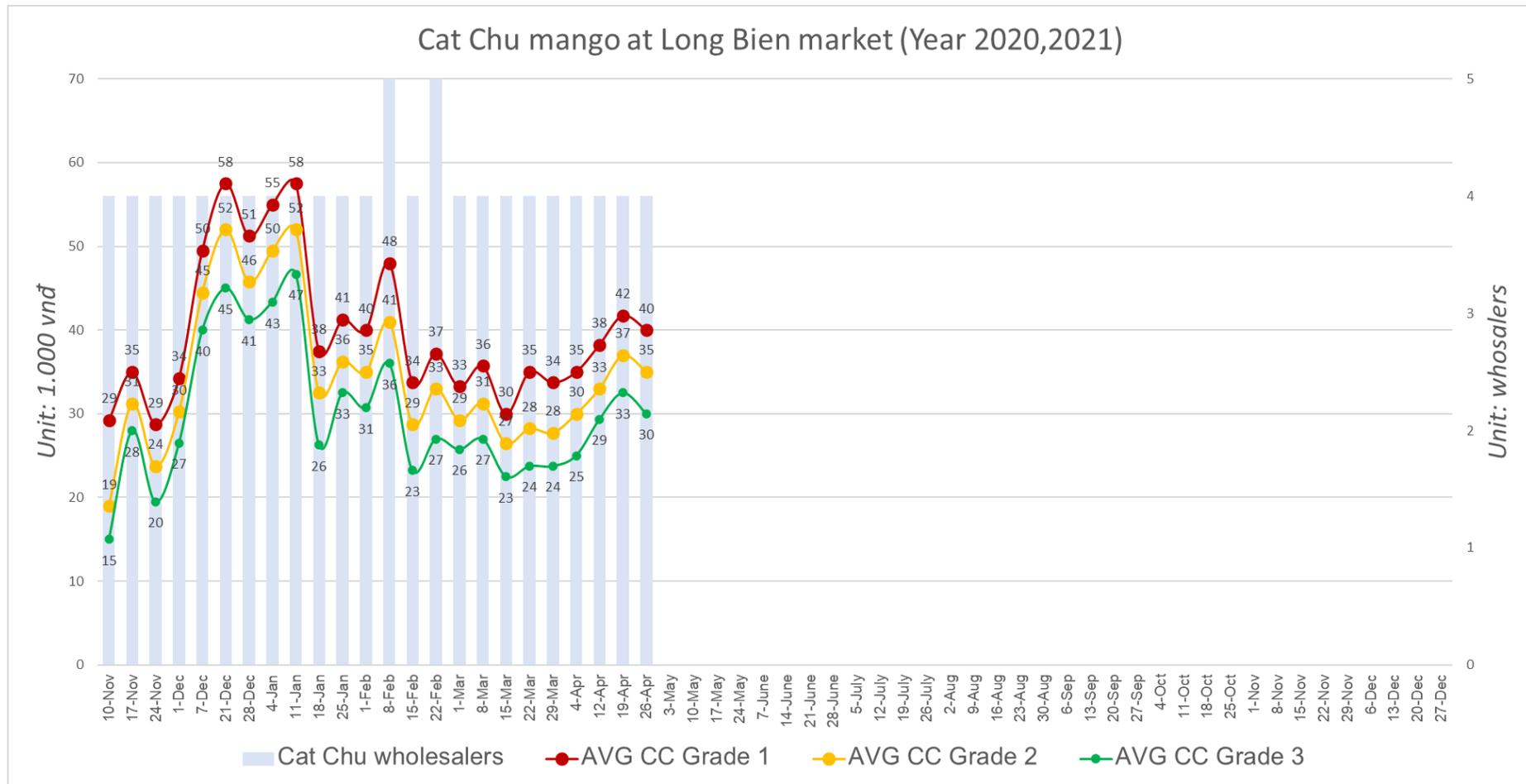


(Source: Weekly mango prices at Binh Dien wholesale market)

## Appendix 6: Weekly mango prices at Long Bien wholesale market

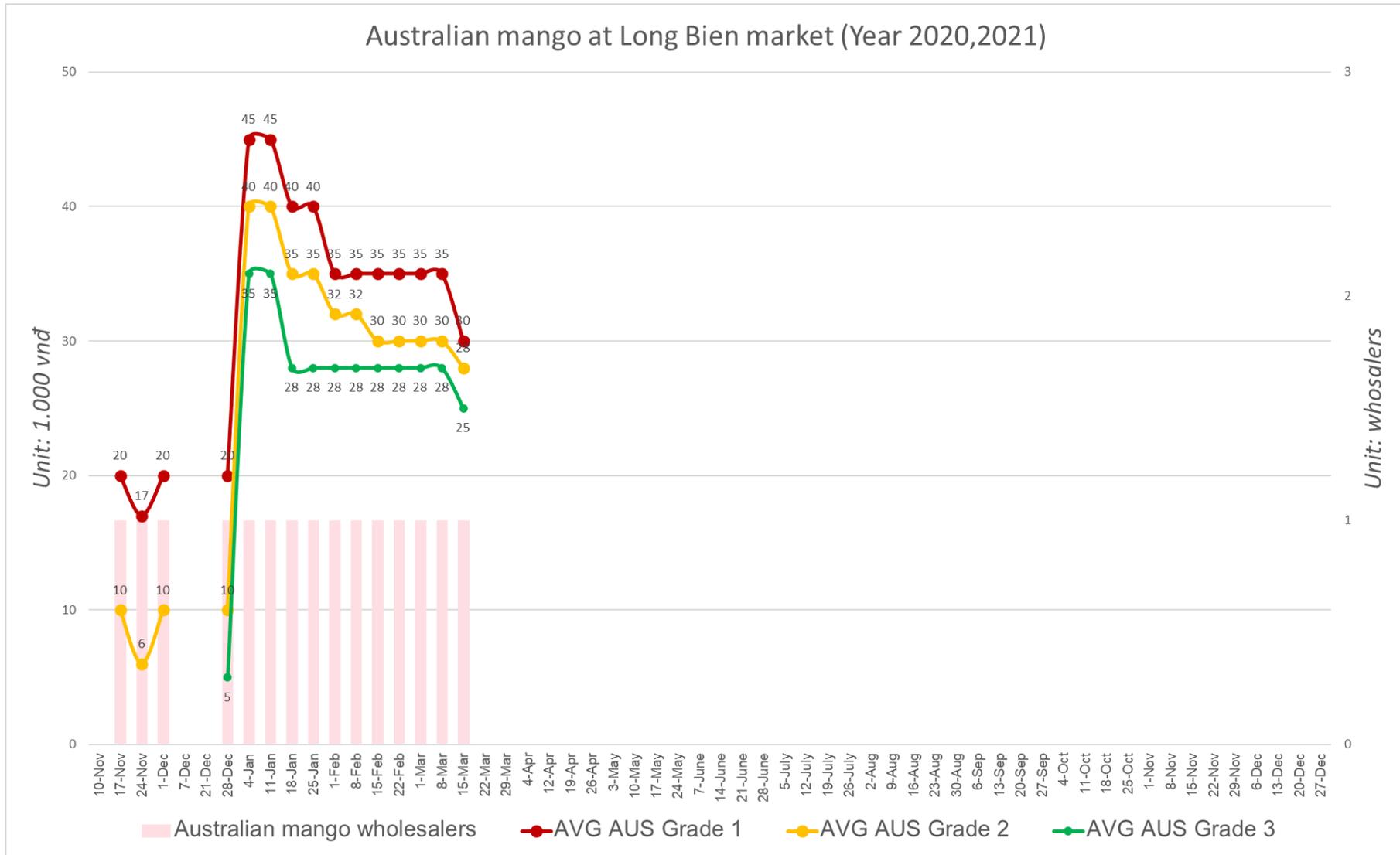
### 6.1. Weekly prices of Cat Chu mango and Australian mango at Long Bien market

Figure 6.1.1. Weekly mango prices of Cat Chu mango at Long Bien market



(Source: Weekly mango prices at Long Bien wholesale market)

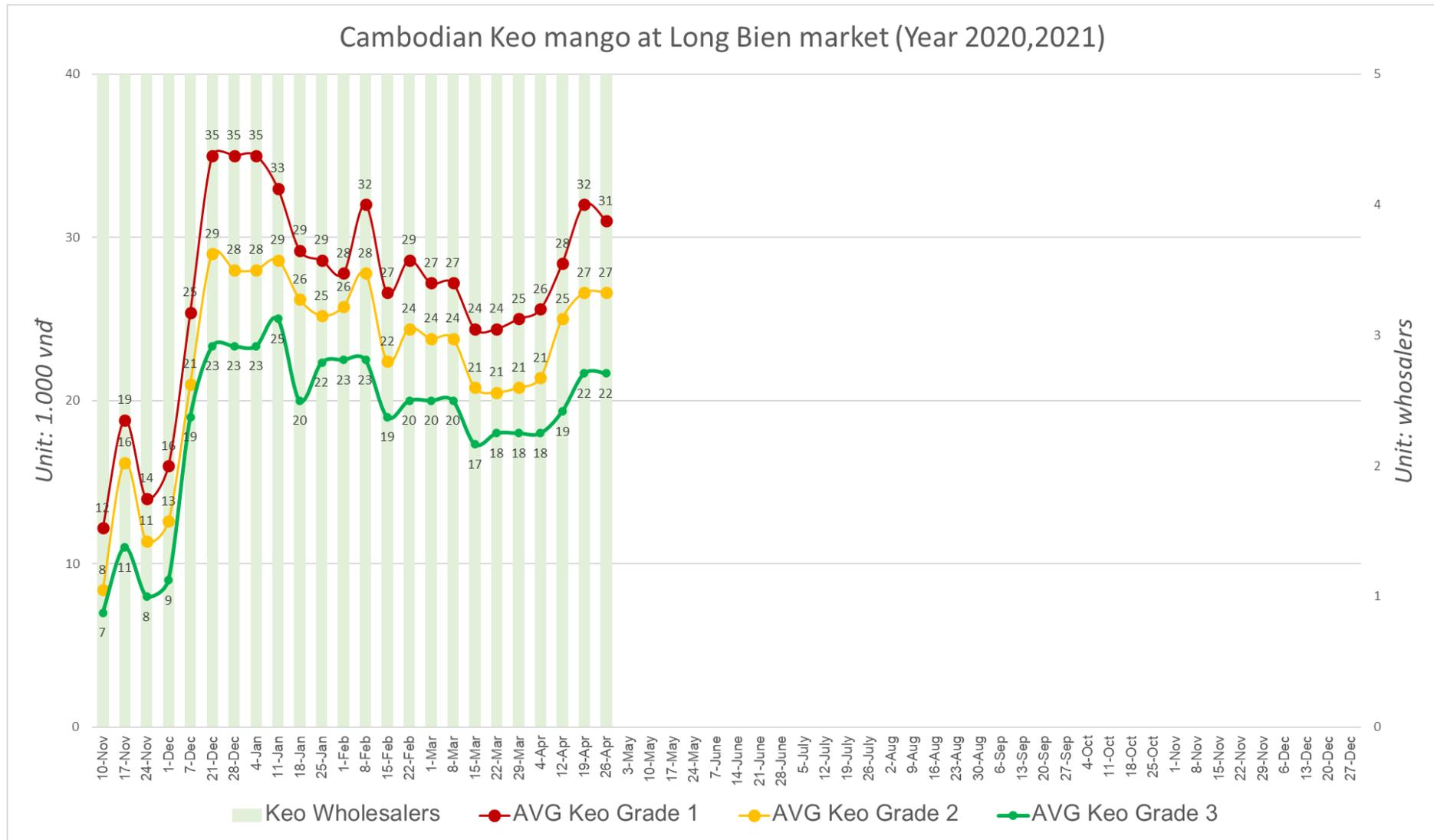
**Figure 6.1.2. Weekly mango prices of Australian mango at Long Bien market**



(Source: Weekly mango prices at Long Bien wholesale market)

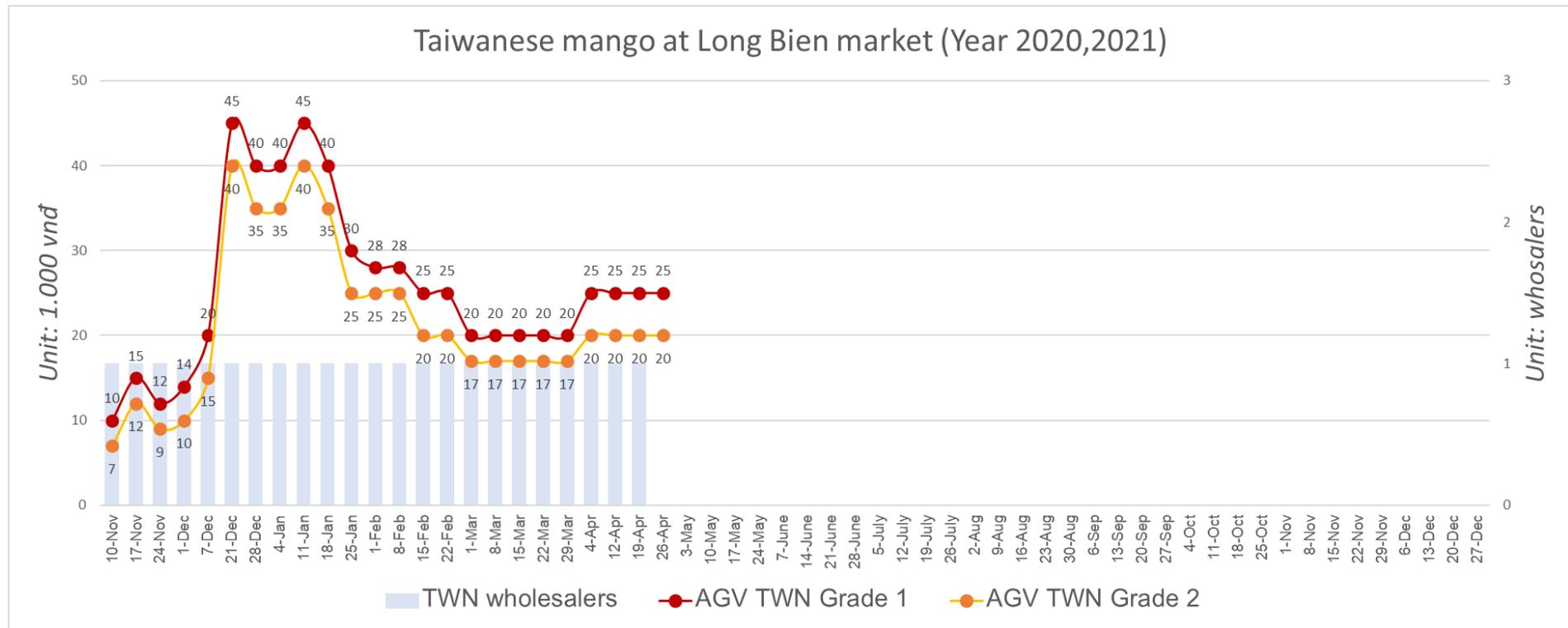
## 6.2. Weekly prices of Cambodian Keo mango and Taiwanese mango at Long Bien market

Figure 6.2.1. Weekly mango prices of Keo mango at Long Bien market



(Source: Weekly mango prices at Long Bien wholesale market)

**Figure 6.1.2. Weekly mango prices of Taiwanese mango at Long Bien market**



(Source: Weekly mango prices at Long Bien wholesale market)

## **Griffith Agribusiness**

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