



Yezin Agricultural University

Department of Agricultural Economics



Study on Marketable Rice Varieties and Rice Based Value Added Products in Selected Areas, Nay Pyi Taw Union Territory



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Introduction

- ✓ Agricultural sector in Myanmar - contribute 25.80% of GDP and 34.96% of total export earnings
- ✓ Total sown area of paddy was 7.12 million hectares in 2022
- ✓ Largest paddy growing areas were Ayeyarwaddy, Bago, Sagaing, Yangon Regions and Shan State
(MOALI, 2022)
- ✓ Rice varieties can be classified as the group of Emahta, Letyawzin, Ngasein, Meedone, Byat
(MOALI, 2021)
- ✓ The most popular consumed and preferred rice varieties in Myanmar were Pawsan, Ayeyarmin and Manawthukha rice varieties
(Theingi Myint et.al, 2016)

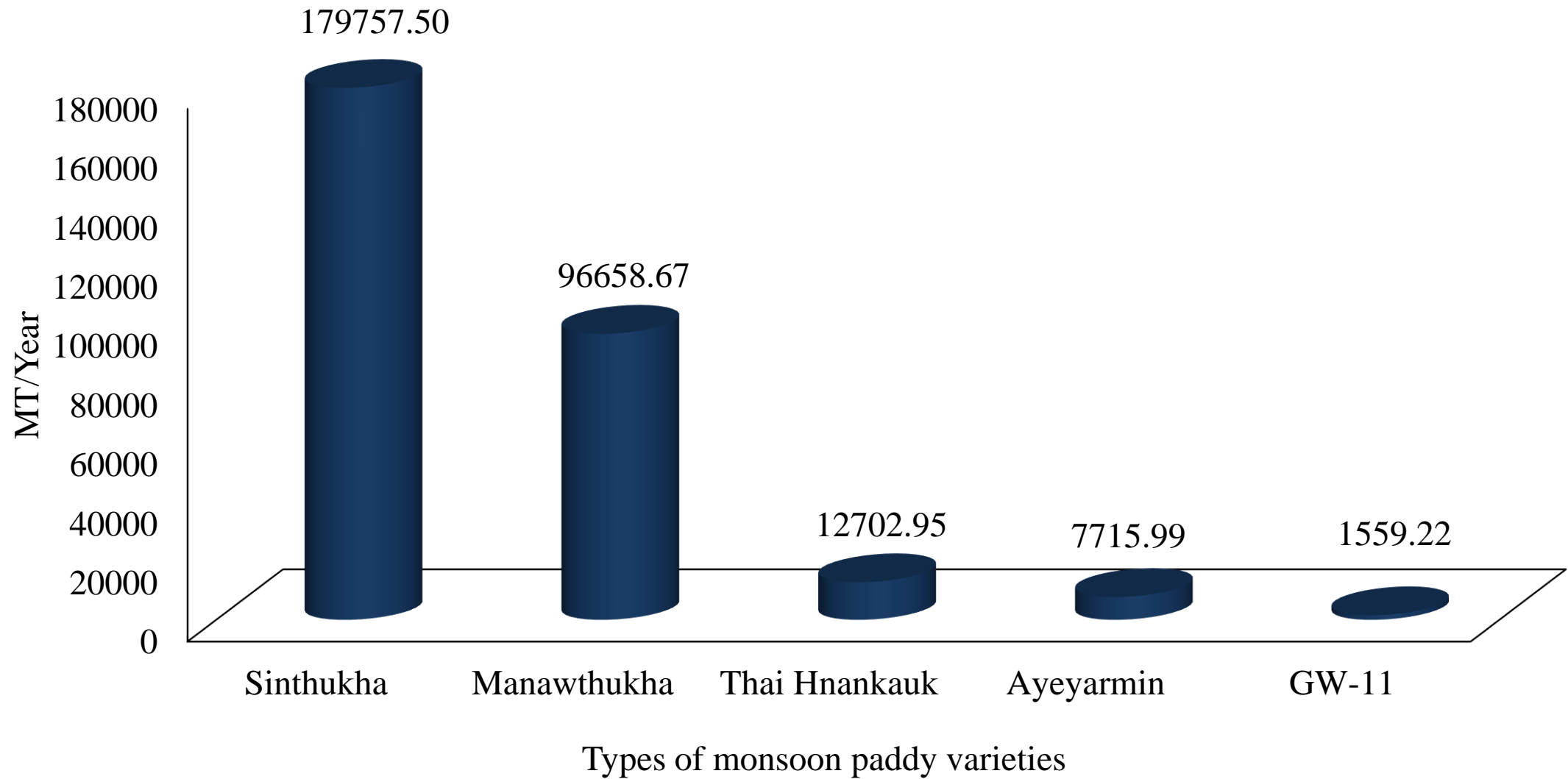


Figure 1. Production of most common monsoon paddy varieties in Nay Pyi Taw Union Territory, 2022

Source: DOA, 2023a

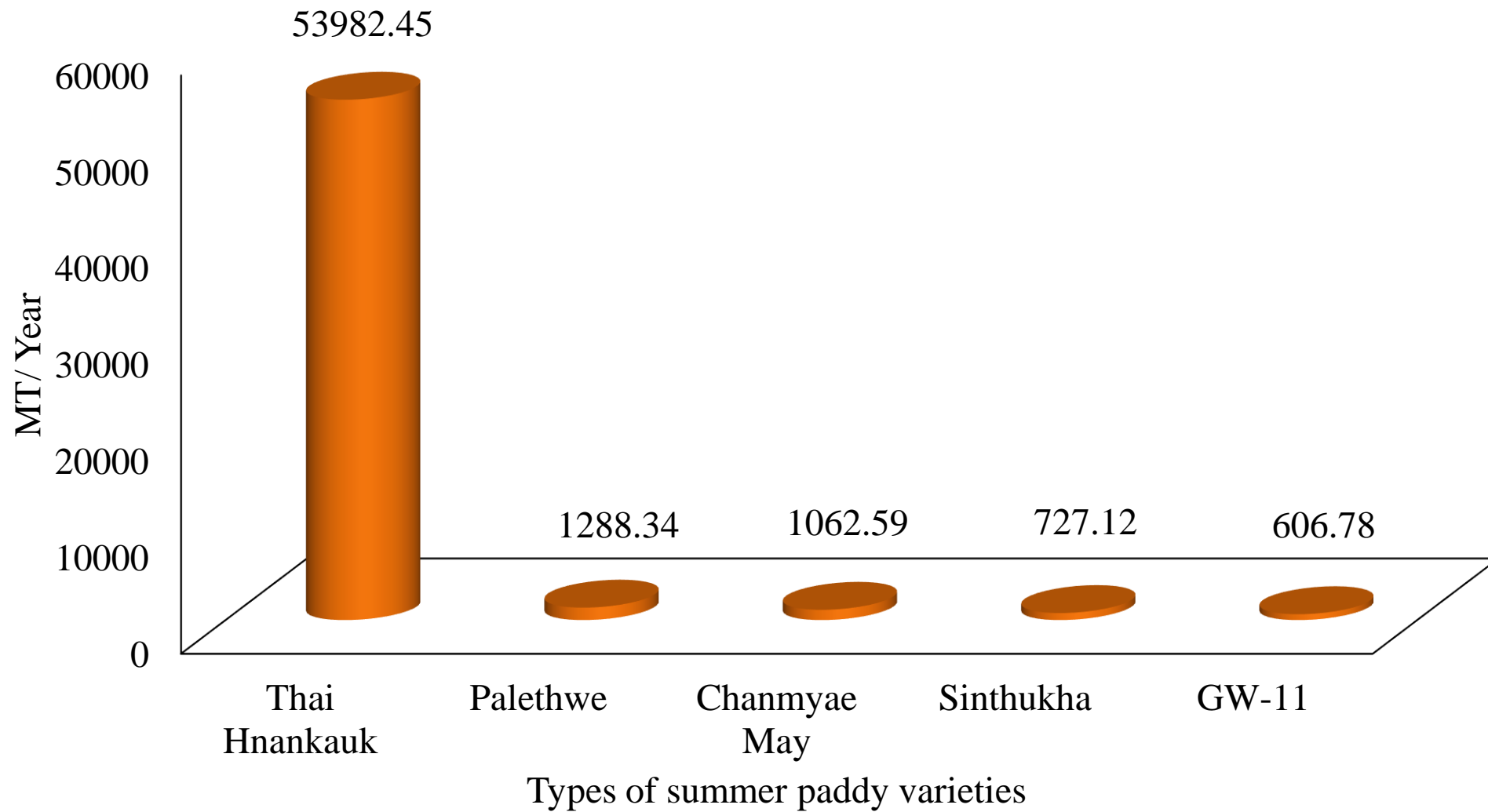


Figure 2. Production of most common summer paddy varieties in Nay Pyi Taw Union Territory, 2022

Source: DOA, 2023a

Rationale of the study

- ❖ Total rice sown area was 80,392 ha in Nay Pyi Taw Union Territory
- ❖ Ten paddy varieties were mostly grown (DOA, 2023a)
- ❖ Marketable rice varieties were Manawthukha, Sinthukha, Pawsan and Ayeyarmin (DOA, 2023b)
- ❖ Quality of products and consumer preference were different depend on the used of rice varieties (Marie et al., 2019)
- ❖ The textural, cooking and sensory properties depend upon the rice flour obtained from different rice varieties (Xiao Fu, 2008)

Objectives

- 1) To study the marketable rice varieties and buying sources of rice and selling types of rice varieties in the selected markets, Nay Pyi Taw Union Territory
- 2) To investigate the ratio and types of rice varieties used for making rice snacks in the selected markets, Nay Pyi Taw Union Territory
- 3) To determine the ratio and types of rice varieties used for making rice noodle in Nay Pyi Taw Union Territory

Research Methodology



General Description of the Study Area

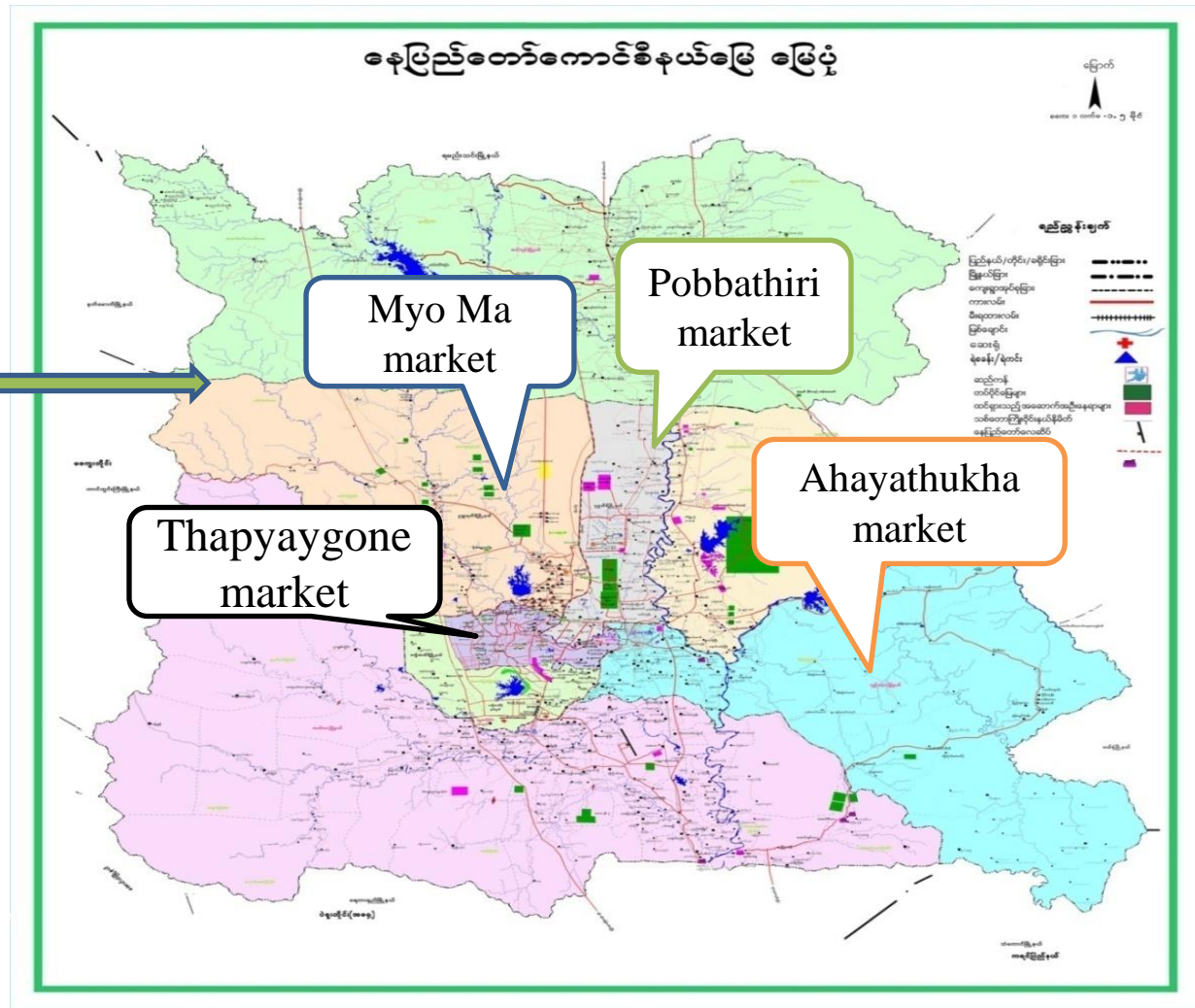
Study area	- Nay Pyi Taw Union Territory
Location	- between 19° 45' N Latitude and 96° 6' E Longitudes and 377 feet above sea level
Total area	- 7057.10 square km
Total population	- 924,608
Composition	- 8 townships

(GAD, 2022)

Total sown area	- 80,392 ha
Total production of paddy	- 351937.64 MT

(DOA, 2023a)

Study Area



Source: DOP, 2022

Figure 3. Selected markets in Nay Pyi Taw Union Territory

Table 1. Sample size of rice wholesalers and retailers, rice snack sellers in the selected local markets, Nay Pyi Taw Union Territory

Selected markets	Rice wholesalers	Rice retailers	Rice snack sellers
Ahayathukha market	4	10	8
Thapyaygone market	8	5	7
Pobbathiri market	5	8	8
Myo Ma market	6	7	8
Total	23	30	31

Table 1.1. Sample size of rice noodle mills from the selected areas in Nay Pyi Taw Union Territory

No. of selected areas	Rice noodle mill owners (n=10)
Pyinmana	7
Zeyarthiri	1
Pobbathiri	2
Total	10



Data collection and Analysis method

- Stratified random sampling method with structured questionnaire
- Field survey – September – October, 2023

Primary data collection

- Rice wholesalers and retailers - selling rice varieties and types, buying sources of rice, strengths and weakness of rice marketing
- Rice snack sellers - selling items of rice snacks, usages of rice varieties in making rice snacks, types of rice, the most commonly used rice varieties
- Rice noodle mills – usages of rice varieties in making rice noodle, buying sources of rice, the most commonly used rice varieties

Analysis Method - Descriptive analysis - coding and analysis in Microsoft Office Excel program and present by frequency, percentage, average, minimum and maximum

Results and Discussion for Objective (1)

- ❖ To study the marketable rice varieties and buying sources of rice and selling types of rice varieties in the selected markets, Nay Pyi Taw Union Territory



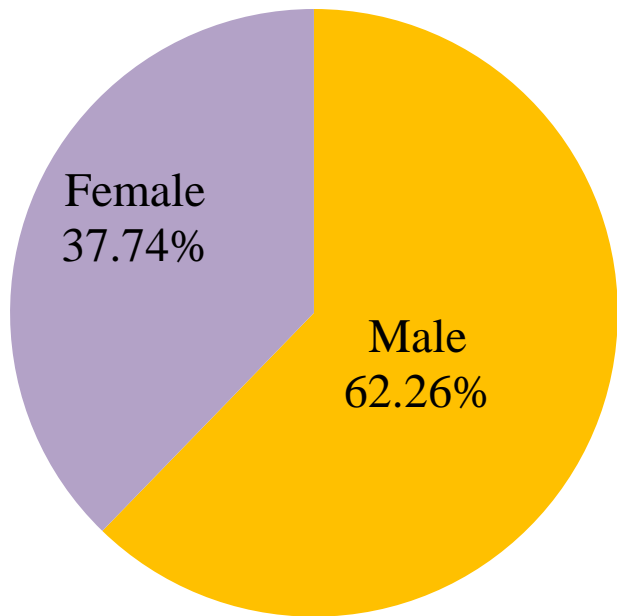
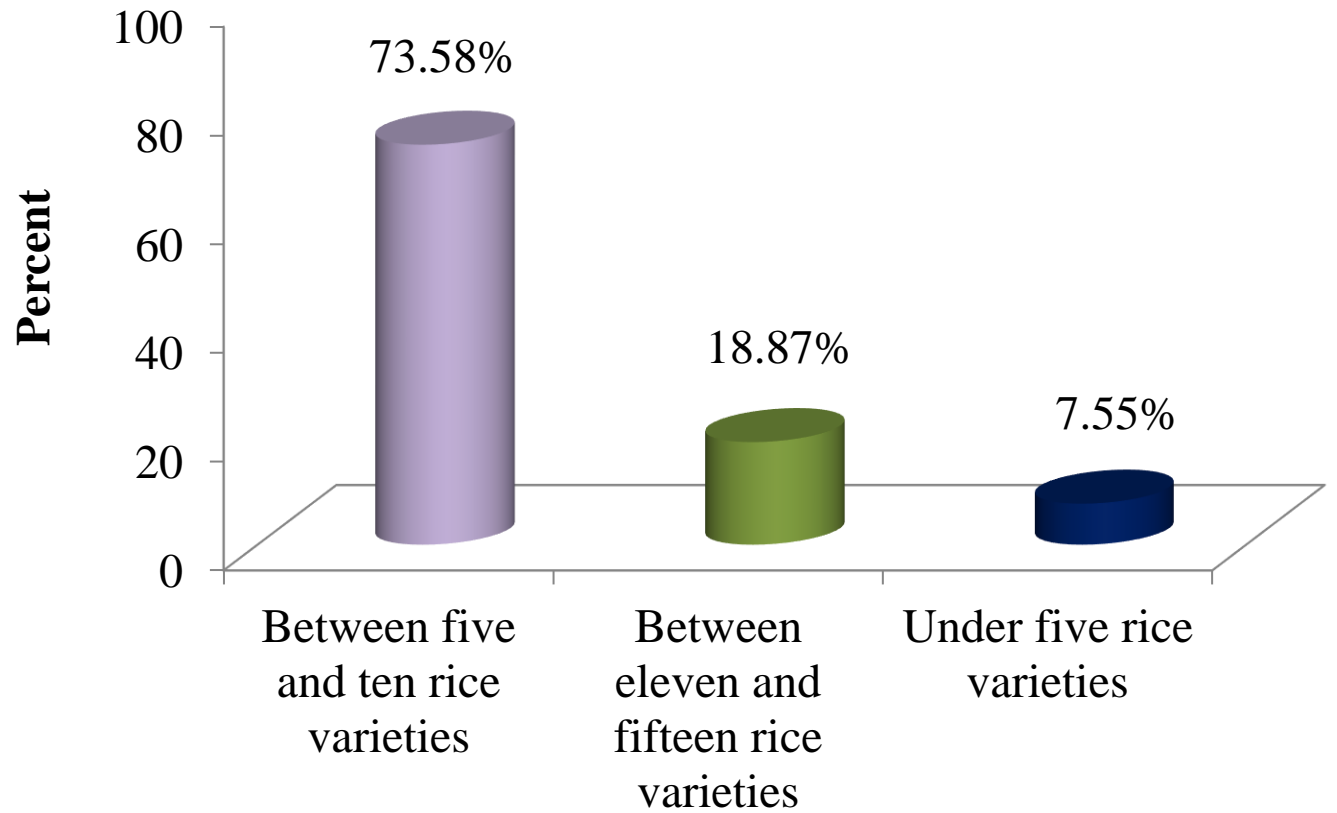


Figure 4. Gender ratio of sample rice wholesalers and retailers (n=53)



Grouping of selling rice varieties

Figure 5. Grouping of selling rice varieties by sample rice wholesalers and retailers in selected markets (n=53)

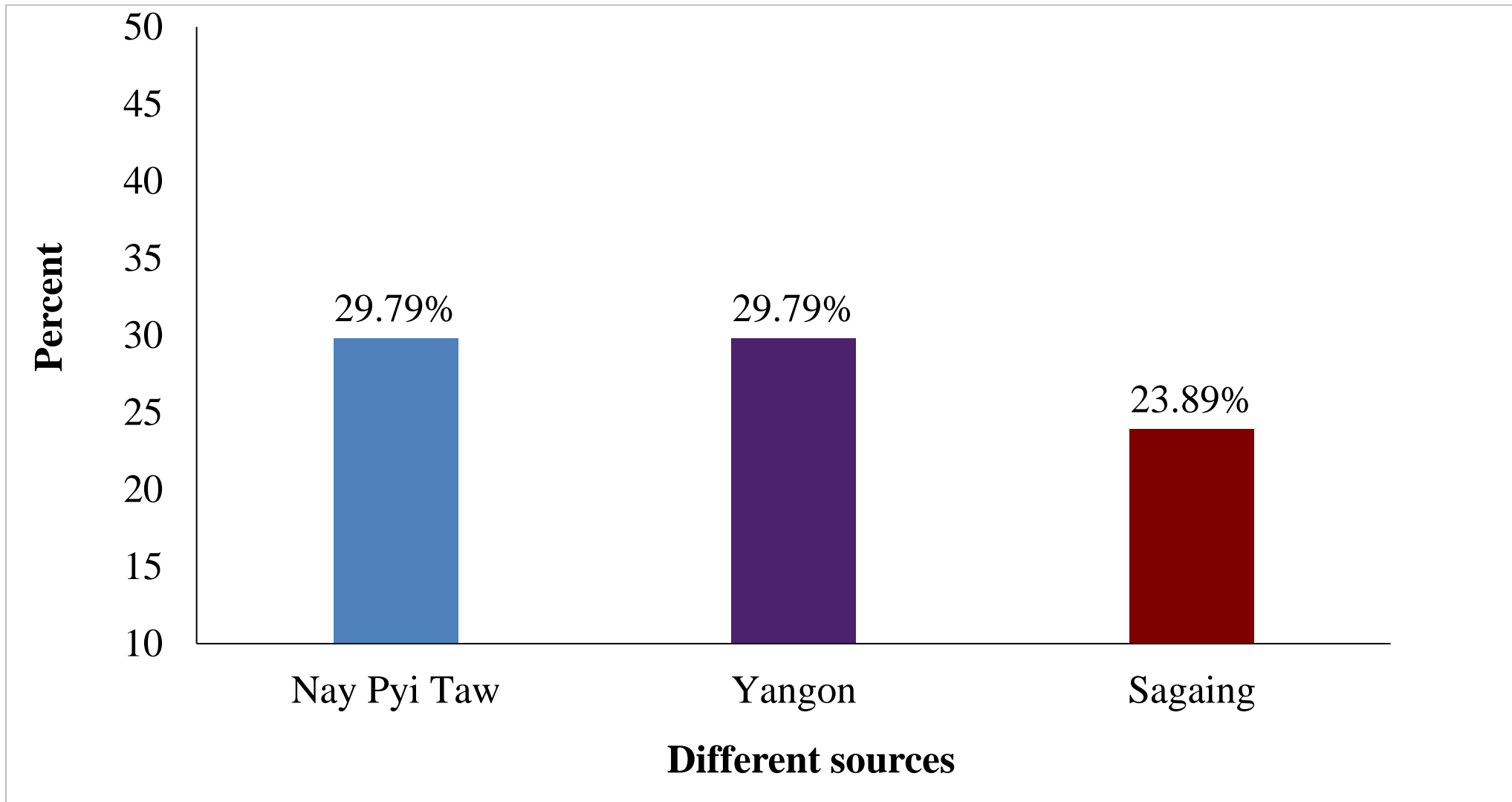


Figure 6. Different buying sources of top 20 marketed rice by sample rice wholesalers and retailers (n= 53)

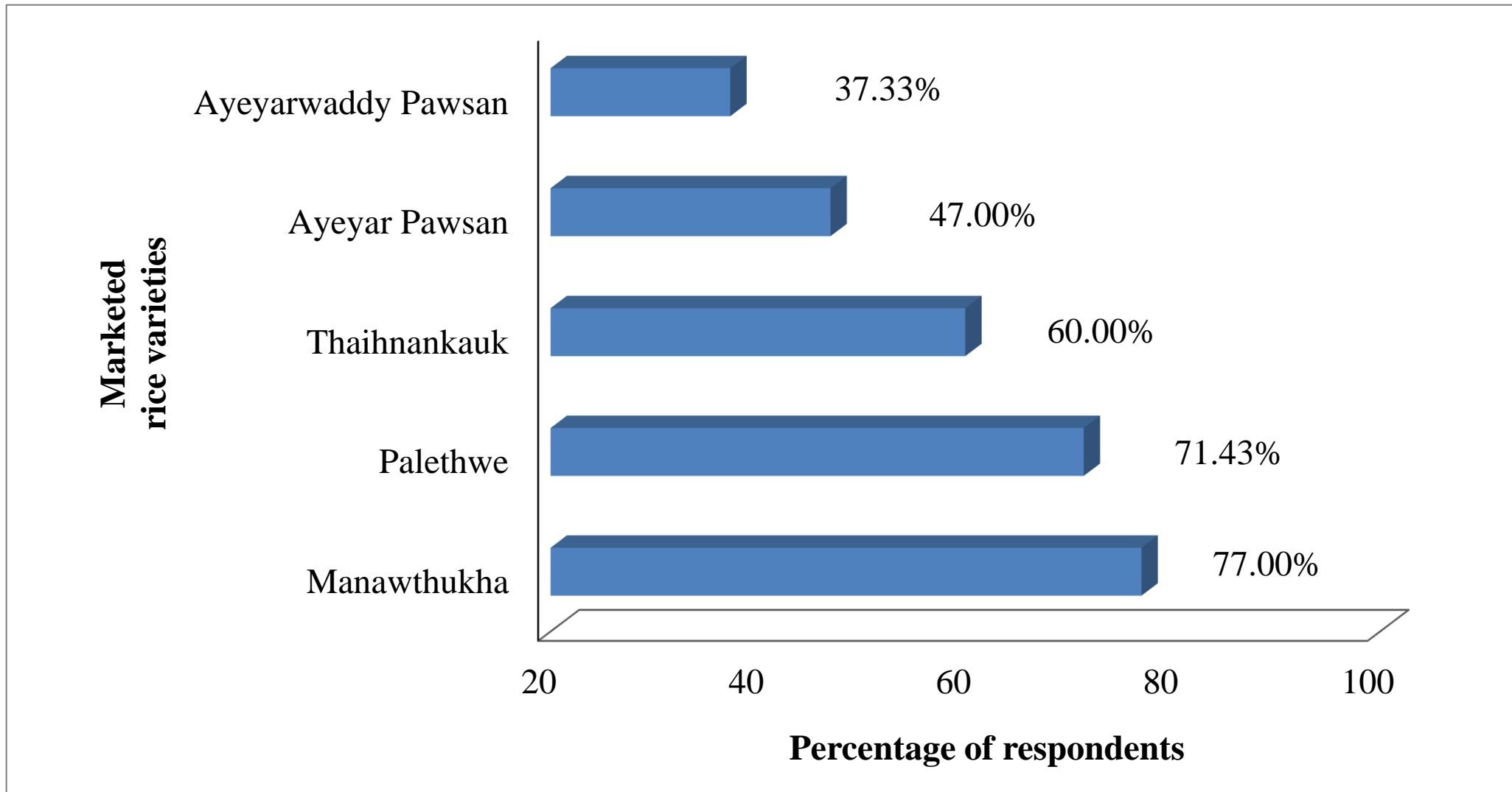


Figure 7. Top marketed rice varieties mainly purchased in Nay Pyi Taw Union Territory by sample rice wholesalers and retailers (n= 53)

Table 2. Top 20 marketed rice varieties ratio and prices of rice by sample rice wholesalers and retailers (n=53)

No.	*Marketed rice varieties	Ratio of marketed rice varieties	Price (MMK/Kg)		
			Average	Maximum	Minimum
1	Manawthukha	92.45	0.79	0.92	0.65
2	Shwebo Pawsan	62.26	1.39	1.46	1.31
3	Pyapon Pawsan	47.17	1.13	1.30	0.93
4	Machando	47.17	0.95	1.12	0.84
5	Ayeyar Padaethar	43.40	1.12	1.23	1.07
6	90-Days	39.62	0.79	0.83	0.77
7	Thai Hnankauk	27.54	0.64	0.78	0.61
8	Sinthukha	27.54	0.64	0.78	0.61
9	<ul style="list-style-type: none"> The most cultivated paddy varieties were Thai Hnankauk, Sinthukha, Manawthukha, Ayeyarmin, GW-11, Chanmyae May and Palethwe in Nay Pyi Taw (DOA, 2023a) 				
10					
11					
12					
13					
14	<ul style="list-style-type: none"> Marketed rice varieties in Nay Pyi Taw- Manawthukha, Ayeyarmin and Pawsan (DOA, 2023b) 				
15					
16	Shwebo Ayeyarmin	16.98	1.52	1.56	1.27
17	MyaungMya Pawsan	15.09	1.18	1.27	1.10
18	Ayeyar Pawsan	15.09	1.13	1.34	0.97
19	Palethwe	13.21	0.64	0.72	0.60
20	Pathein Pawsan	11.32	1.06	1.14	0.95

Note: 1 bag (24 pyi) of rice= 51kg, US\$ to Myanmar Kyats-2100 (Date - 11.1.2023)

* established means that the names of marketed rice varieties are commonly used in the selected markets.

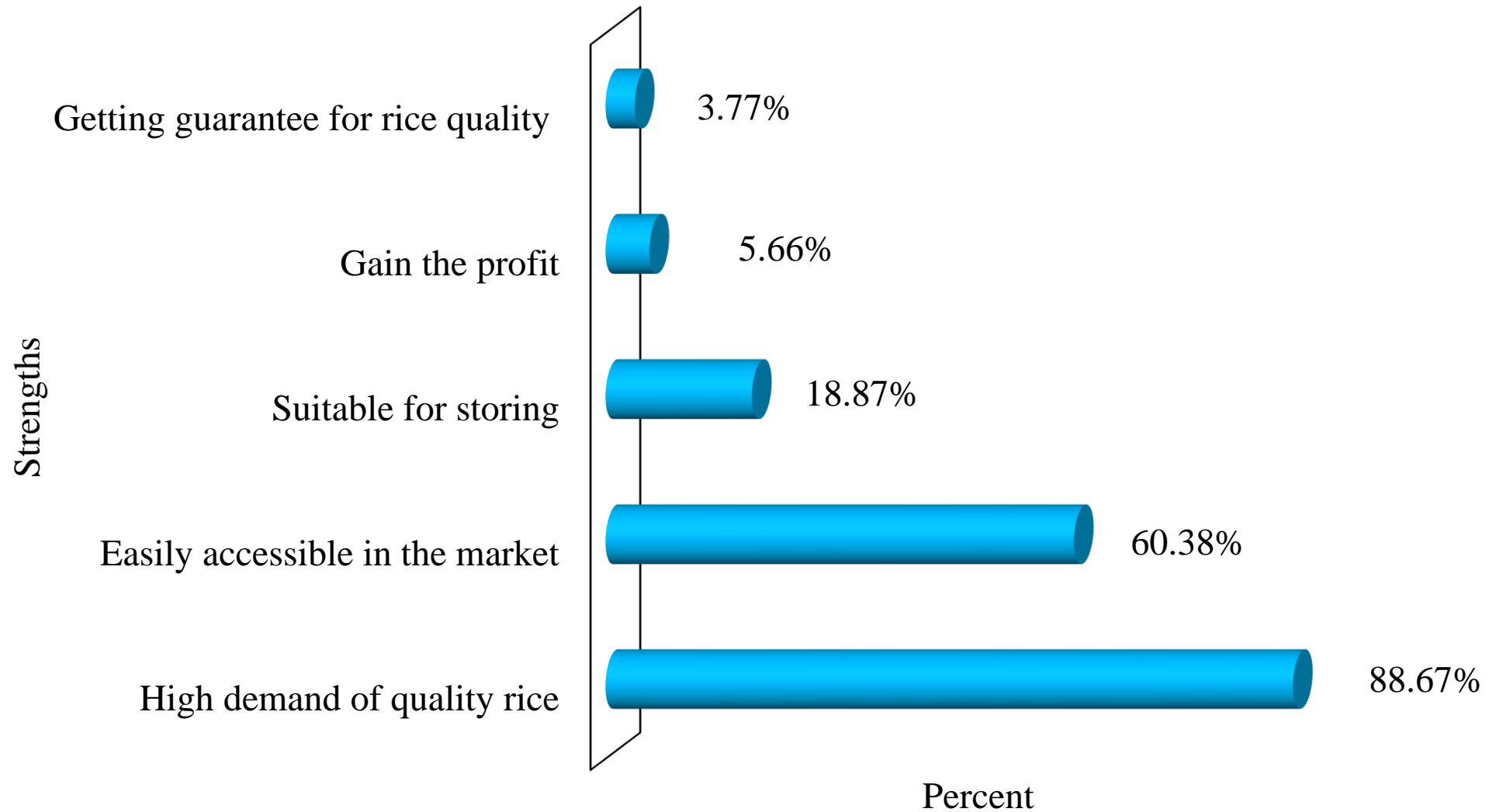


Figure 8. Strengths of rice marketing by sample rice wholesalers and retailers (n=53)

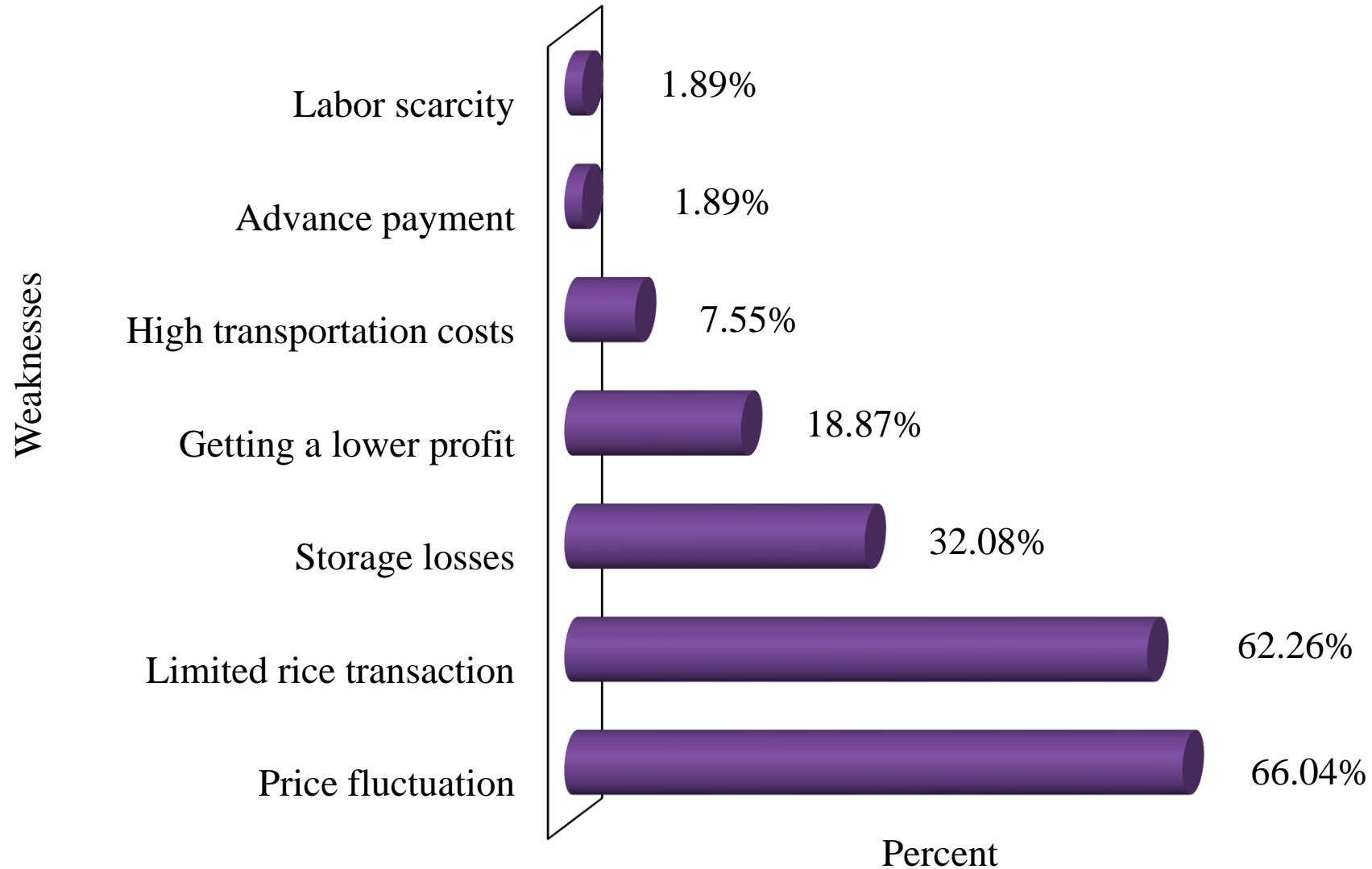


Figure 9. Weaknesses of rice marketing by sample rice wholesalers and retailers (n=53)

Results and Discussion for Objective (2)

- ❖ To investigate the ratio and types of rice varieties used in making rice snacks in the selected markets, Nay Pyi Taw Union Territory



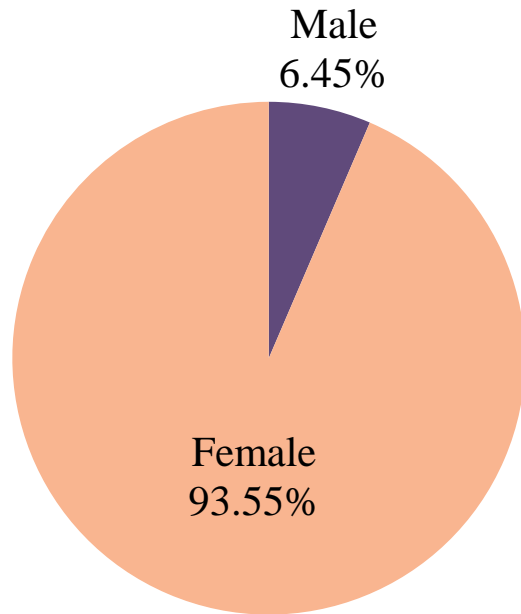


Figure 10. Gender ratio of sample rice snack sellers (n=31)

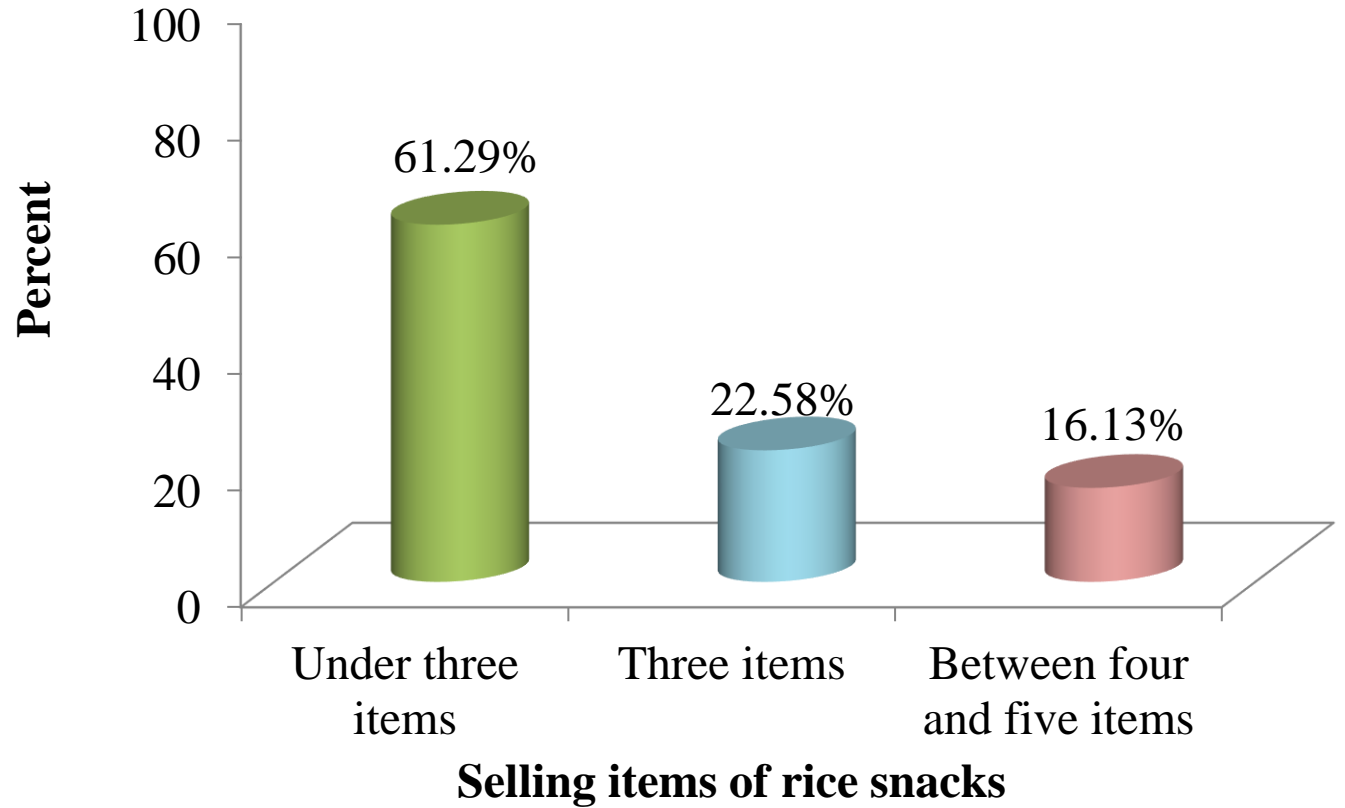


Figure 11. Grouping of selling items ratio by sample rice snack sellers (n=31)

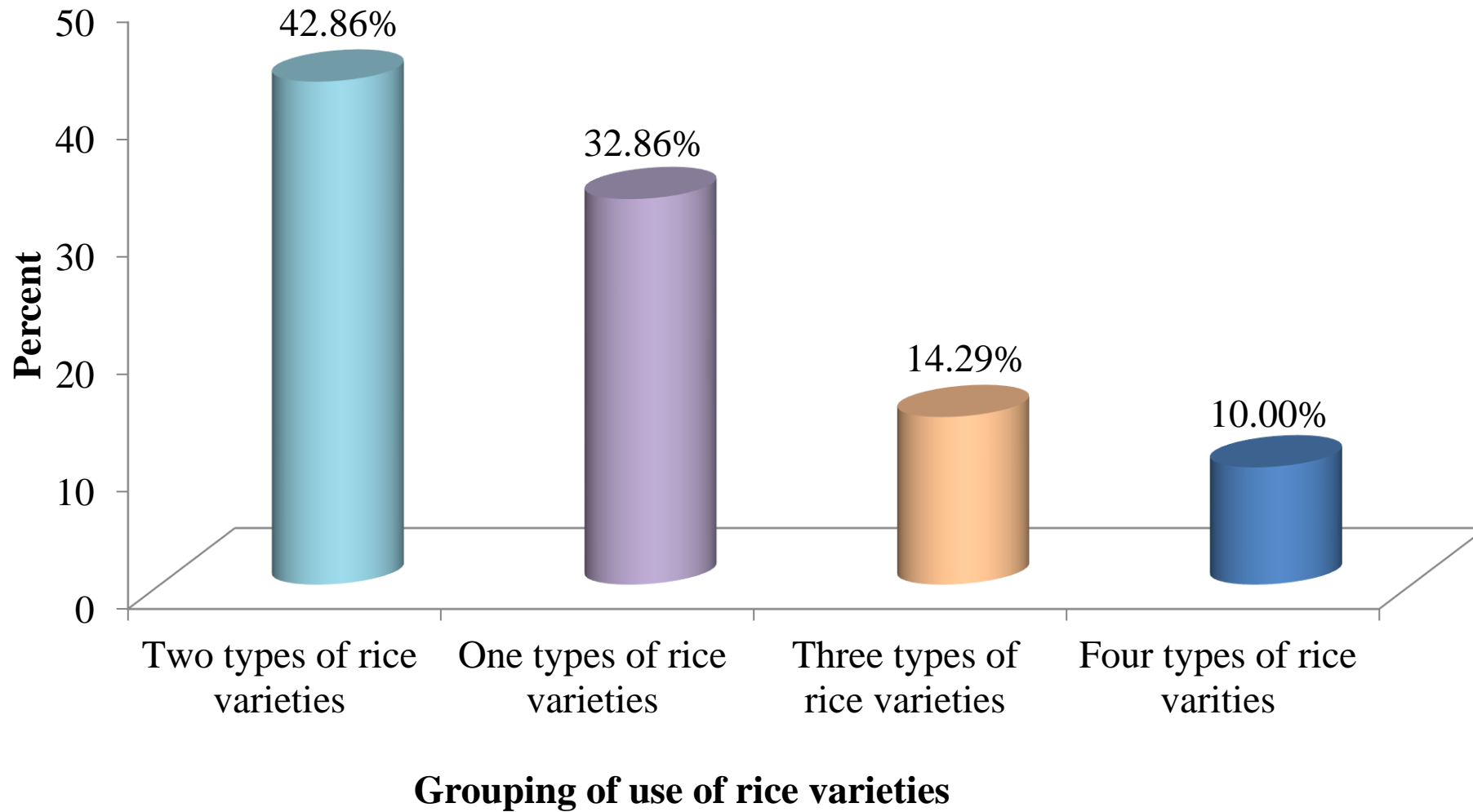


Figure 12. Usage of rice varieties grouping by sample rice snack sellers (n=70)

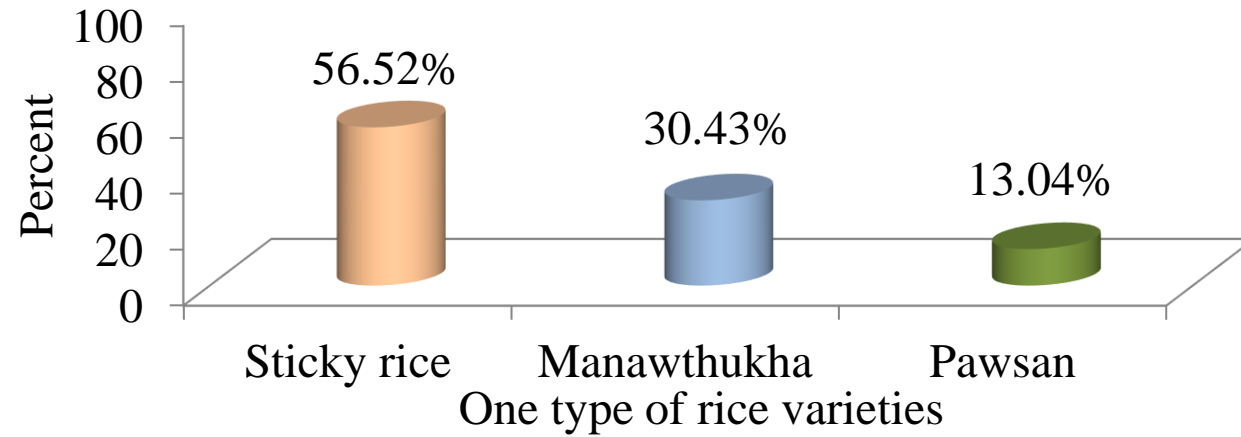



Figure 13. One type of rice variety used in making rice snacks (n=23)

Kaukhnyin-Bein-mont			Mont-lone-yepaw		
Mont-pya-tu-on			Kauk-hnyin-kyi-tauk		
Pyaye-htoke			Mont-paukse		
Sticky Rice sa-nwin-ma-kin			Khaw-pyin		
Cocolicious Sticky Rice mont-lone-gyi			Kaukhnyin-kwet-kyaw		
Mont-si-kyaw					
Mont-kywe-the			Arr-pone		
Mont-lake-pyar			Mont-pel-sote		
Mont-gyi-salaung			Mont-kyet-u		
Butter-bein-mont			Mont-baing-doung		
Mont-salin-daunt					

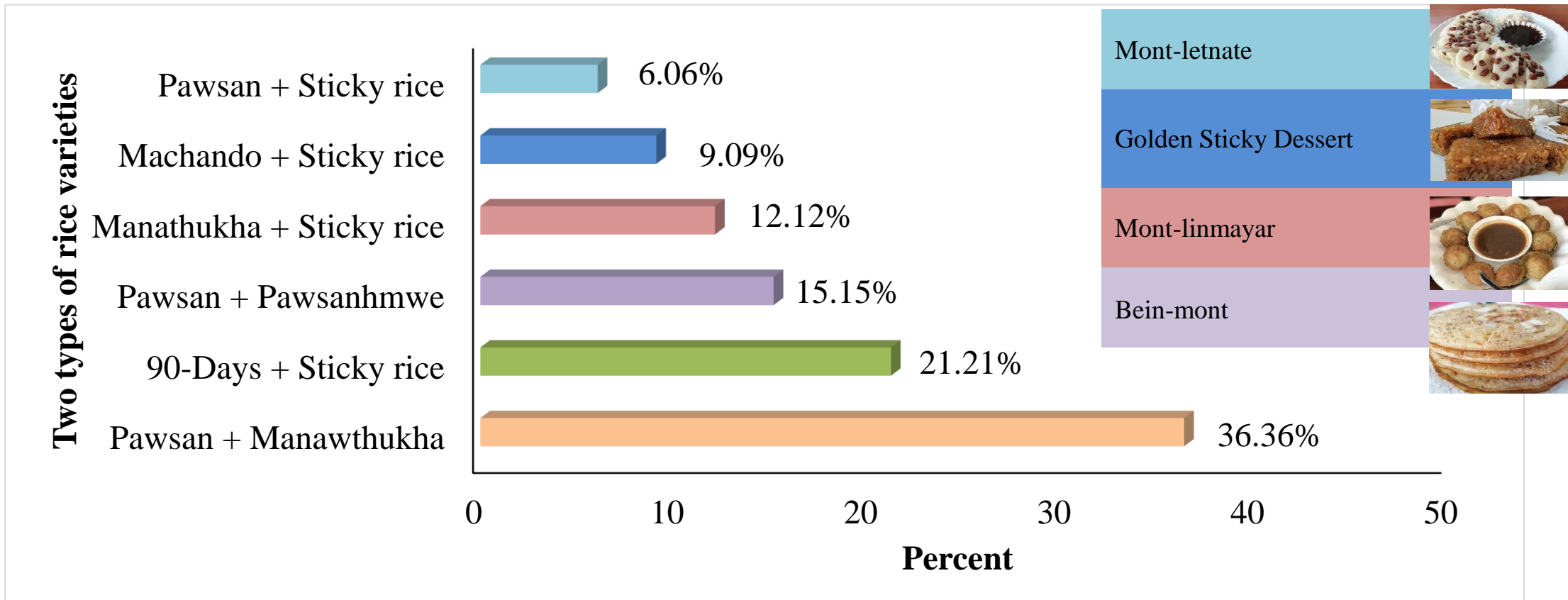
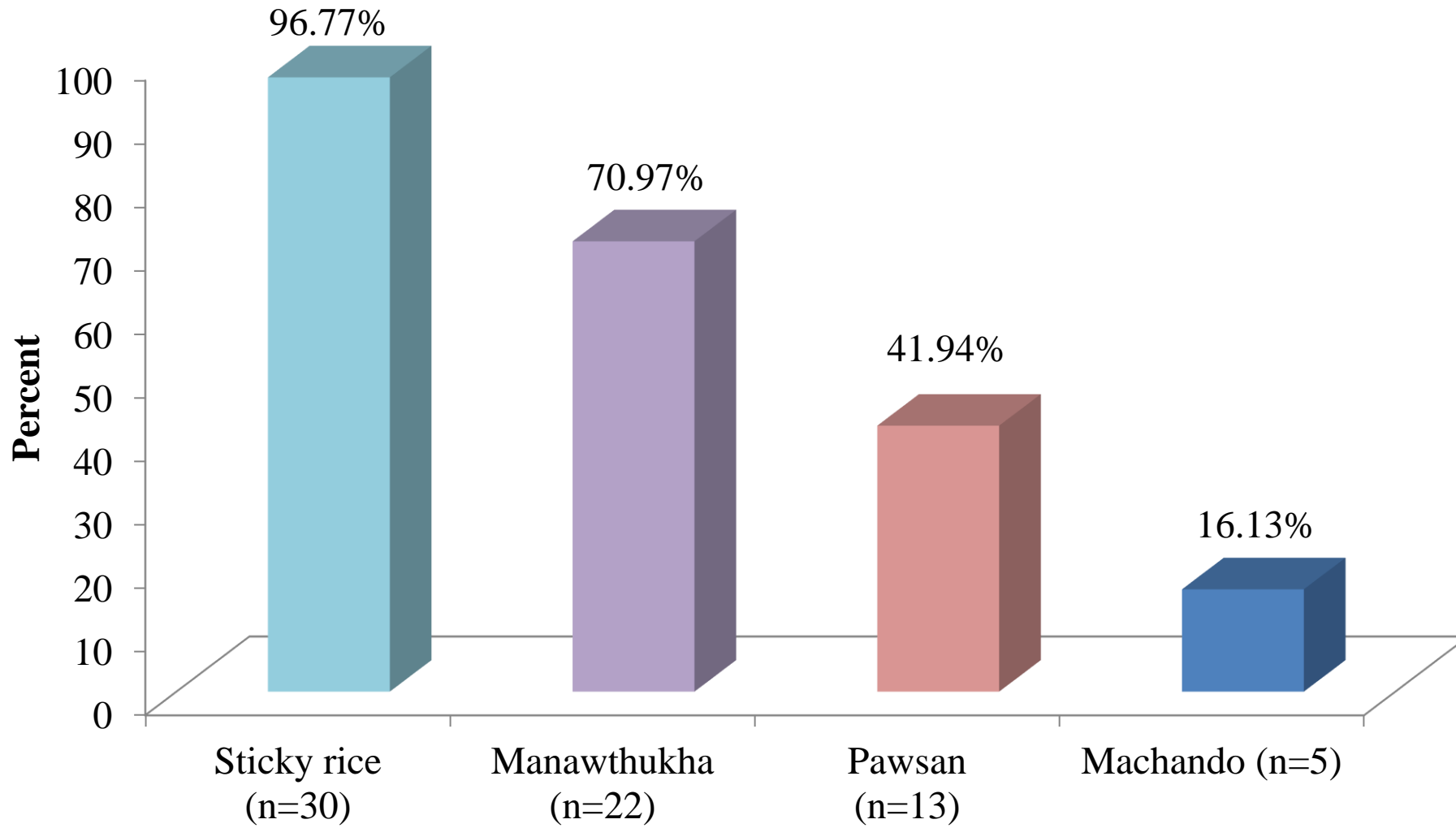


Figure 14. Two types of rice varieties used for making rice snacks (n=33)

Ngetpyaw-kyaw		Yay-mont	
Khauk-mont		Mont-let-kauk	
Mont-let-kauk		Tempura	
Mont-phet-htoke		Khauk-mont	



The most commonly used rice varieties

Figure 15. Top four commonly used rice varieties for making rice snacks (n=31)

Results and Discussion for Objective (3)

- ❖ To determine the ratio and types of rice varieties used in making rice noodle in Nay Pyi Taw



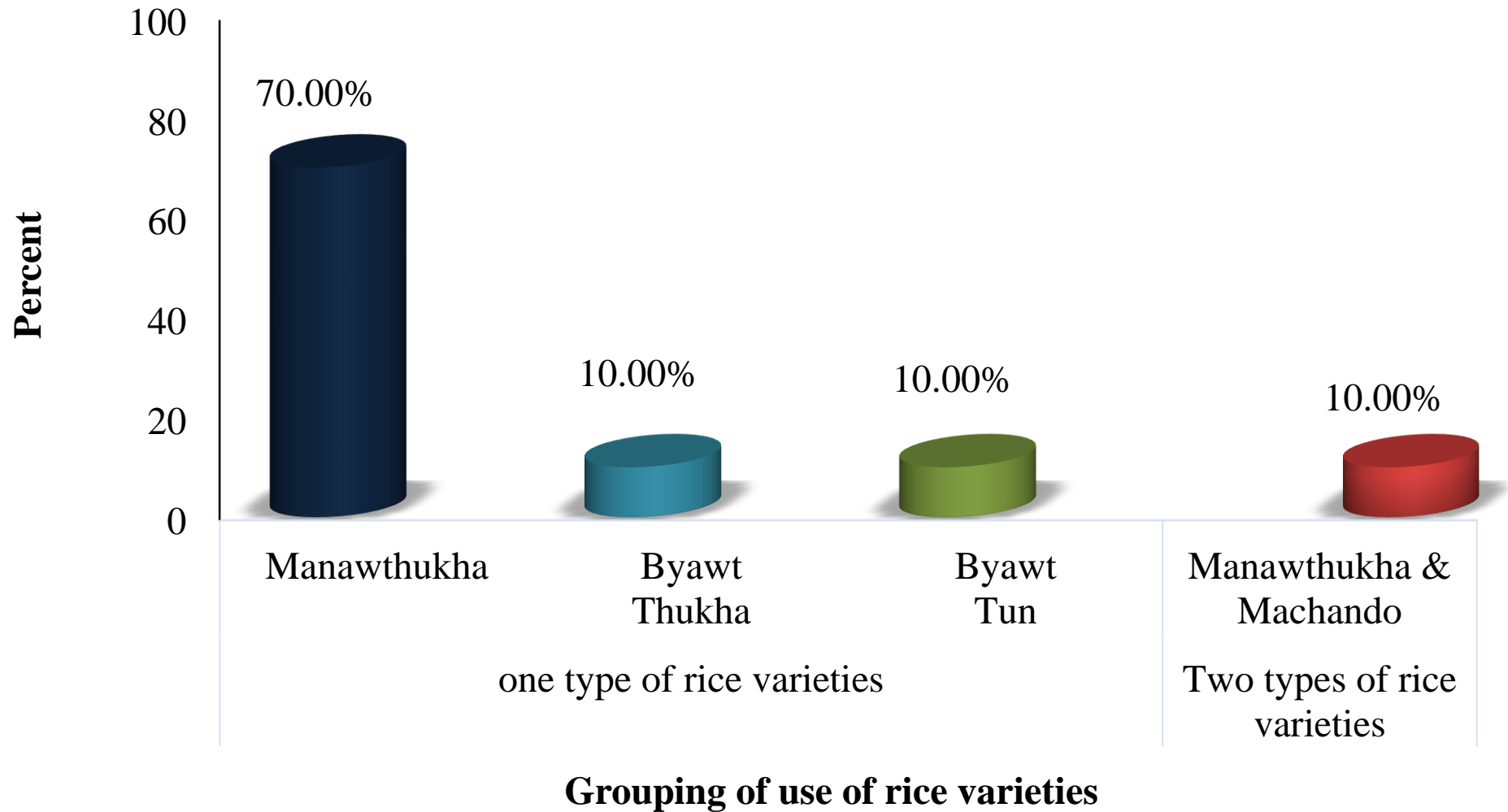


Figure 16. Grouping of use of rice varieties by sample rice noodle mills (n=10)

Conclusion

Rice Markets

- Top five marketed rice varieties Manawthukha, Shwebo Pawsan, Pyapon Pawsan, Machando and Ayeyar Padaethar
- Major buying sources of rice varieties Directly bought from Nay Pyi Taw, Yangon and Sagaing regions
- Mainly purchased rice varieties from Nay Pyi Taw Manawthukha, Palethwe, Thai Hnankauk, Ayeyar Pawsan and Ayeyarwaddy Pawsan rice varieties
- Major strengths High demand of quality rice and easily accessible in the market
- Major weakness Price fluctuation and limited rice transaction

Conclusion (Contd.)

Rice Snack

- Mostly used of two types of rice varieties Pawsan+ Manawthukha, 90-Days + Sticky rice, Manawthukha + Sticky rice and Machando + Sticky rice varieties
- Most commonly used of rice varieties Sticky rice variety

Rice noodle

- Mostly used Manawthukha
- Mostly used of two types of rice varieties Manawthukha + Machando
- Most commonly used of rice varieties Manawthukha rice variety

Recommendations

1. Popular marketed rice varieties and commonly used rice varieties for snacks and noodles should be used for farmers' decision-making in the selection of rice varieties to grow.
2. Information about rice varieties could be useful for rice breeding programs and distribution strategies as the demand-driven plan formulation for the future researches of the rice industry in Myanmar.



THANK YOU FOR YOUR KIND ATTENTION

Rice noodle



Mont-pyar-thalet



Bein-mont



Khauk-mont