



Monitoring the Agri-food System in Myanmar

Agricultural Input Retailers – August 2023 survey round

To understand the effects of political instability and related shocks on Myanmar's agricultural input sector, we conducted a phone survey of 187 input retailers throughout the country in August 2023.

Key Findings

- Fertilizer and pesticides were generally more available in 2023 monsoon than in 2022, though seeds were less available. More input retailers reported higher fertilizer sales in 2023 compared to pre-pandemic sales in 2019. Also on a positive note, the share of input sellers reporting low input demand dropped in 2023 compared to 2022.
- Nominal fertilizer prices remain high in 2023, but sales have increased and prices relative to rice prices decreased 50 percent for urea and 38 percent for compound compared to 2022.
- The percentage of input retailers reporting transportation disruptions has declined over the past 12 months, but 66 percent of retailers still report higher transportation costs.
- Import challenges are now the most significant disruption to input retailers' businesses, increased more than sixfold from less than 5 percent in 2022 to 30 percent in 2023. Fifty-six percent of input sellers could not acquire at least some inputs.
- More retailers reported purchasing and selling inputs on credit in 2023 compared to 2022 and demand for both credit in and credit out remain high.
- The input retail sector has generally experienced growth in fertilizer sales over the past 10 years. Competition has also increased with 92 percent more input sellers in retailers' village tracts or wards in 2023 compared to 2013 and 27 percent more relative to pre-COVID levels.

Looking Forward

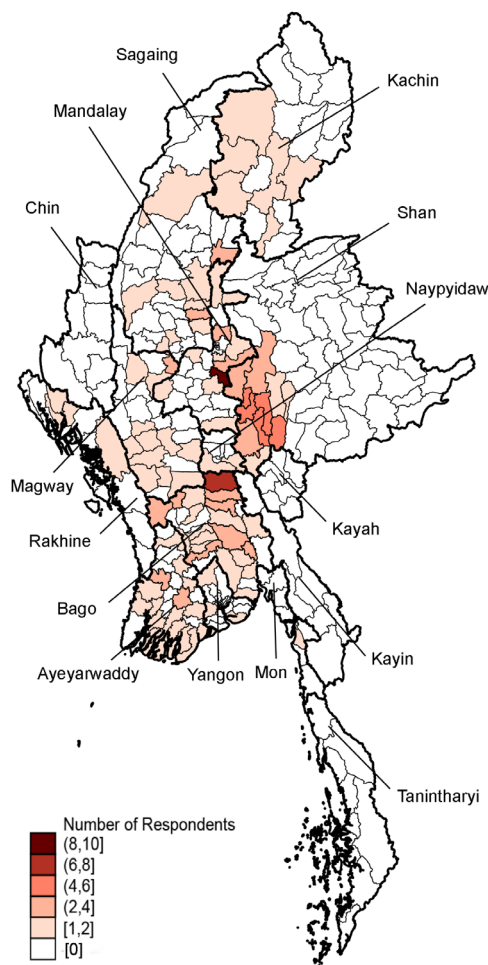
- Higher fertilizer sales and decreased transportation disruptions in each agro-ecological zone relative to last year are positive signs for 2023 monsoon crop production.
- However, unpredictable import processes and foreign exchange regulations could negatively affect input availability in the upcoming seasons.
- More input retailers reported challenges with recovering credit lent out to farmers, and more farmers were buying inputs on credit in 2023 compared to 2022, indicating that farmers are still cash constrained.



Introduction

Agricultural input retailers play a key role in Myanmar's agri-food system by supplying farmers with fertilizer, seed, pesticides, and other inputs necessary for agricultural production. Because farm-level input use is an important driver of yields for all major food crops, economic shocks to the input retail sector have major implications for rural household welfare as well as for food security.

Figure 1. Map of Input Retailer Sample



In this Research Note, we present results and analysis of recent economic disruptions on agricultural input retailers from a telephone panel survey of 187 retailers conducted across eleven of Myanmar's 15 states and regions in August 2023 (Figure 1). This survey is a continuation of a panel survey that began in June 2020 during the first wave of COVID-19 in Myanmar. We have expanded the sample over time to achieve a higher number of observations and wider geographic coverage, though it is important to note that the sample is not representative of the population of input retailers in Myanmar, in particular the sample is thin in some contested regions in the northwest, and southeast. This note examines (i) disruptions to the agricultural input sector, most notably high transportation costs and import difficulties; (ii) credit changes since last year, including loans taken in and credit provided out to farmers; (iii) changes in sales quantities and prices of important agro-inputs including fertilizers, seeds, and pesticides; and (iv) some trends in input retail sector in the last 10 years.

Below we disaggregate fertilizer price results by agro-ecological zones (AEZ) to understand spatial variations while maintaining at least 45 respondents in each group (Table 1). In our sample, median sales in July and asset ownership are lower in the Dry Zone than Hills or Delta,

The Hills input retailers are more likely to own a truck, though only one third do, while Delta and Dry Zone retailers are more likely to own motorcycles.

Table 2. Input retailer sample descriptive information by agro-ecological zone

	Agro-ecological zone			
	All	Delta	Dry Zone	Hills
N (active)	187	45	76	66
Median total sales value in last 30 days ('00,000 MMK)	200	200	100	200
<i>Machine ownership (% share)</i>				
Truck for inputs	21	18	15	33
Trawlerjee	10	12	8	11
Motorcycle	44	45	48	36
Scale	55	66	38	60

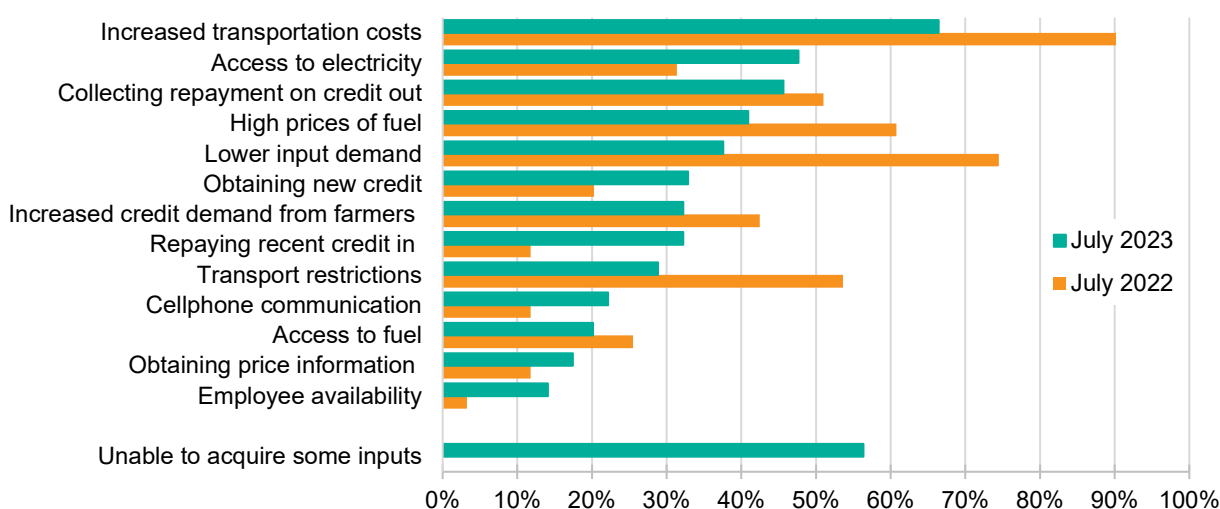
Source: Agricultural input retailer phone survey–August 2023 round.

Note: 5 observations from Rakhine are added to Delta region due to the low number of observations in the coastal zone.

Business disruptions and their impacts

To understand the effects of economic disruptions on input retailers, we asked whether businesses had been affected by a list of potential shocks. Figure 2 shows the shocks experienced by input retailers in July 2023 and one year prior. While increased transportation costs still remain one of the most common disruptions, its share has dropped from 90 percent in 2022 to 66 percent this year. There are similar declines in other transportation disruptions including high prices of fuel, and transport restrictions. Encouragingly, the share of input sellers reporting low demand for inputs dropped by nearly half from 75 percent in 2022 to 38 percent in 2023. However, more than half reported not being able to acquire some inputs (a new disruption category added for 2023). Electricity challenges have increased, as have credit challenges such as obtaining new credit and repaying recent credit, as well as cell phone communications and employee availability.

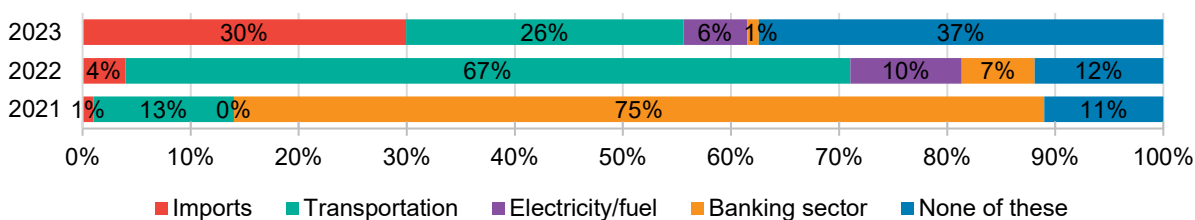
Figure 2. Disruptions experienced by input retailers in July 2023 and July 2022, percentage reporting, panel sample only (N=153)



Sources: Agricultural input retailer phone survey– August 2023 and July 2022 round

To provide more information on the magnitudes of disruptions, we asked retailers which challenge was the most significant. Figure 3 shows response shares for the 2021, 2022, and 2023 monsoon seasons. There are pronounced shifts across the years. Banking disruptions, the largest disruption in 2021 fell to just 7 percent in 2022 and further to just 1 percent in 2023. Transportation disruptions were the most common answer in 2022 but fell by 40 percentage points in 2023. The most common response in 2023 with 30 percent is import disruptions, which was less than 5 percent of the responses in 2022 and 2021. Myanmar imports a large share of its fertilizers and pesticides, thus import challenges affect input availability.

Figure 3. Most significant disruption experienced by input retailers by monsoon season, percentage reporting



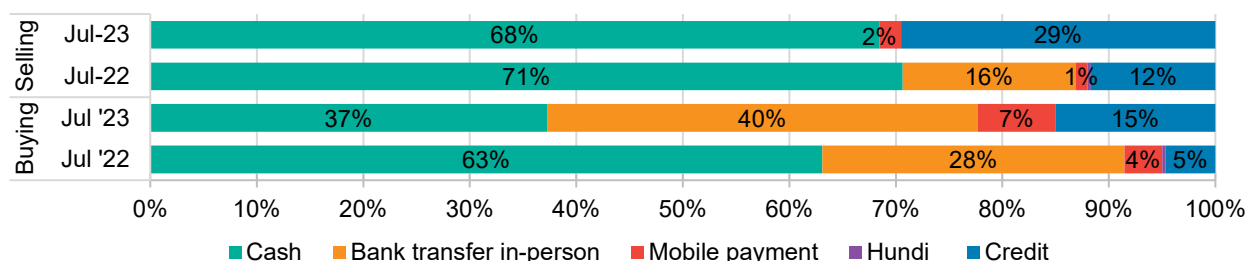
Sources: Input retailer phone survey–August 2023 (N=187); July 2022 (N=252); and June 2021 (N=136).

Notes: The option of 'electricity/fuel' was added in the July 2022 survey and is thus not available for previous rounds.

We also note that respondents are now much more likely to report not having been impacted by any of these disruptions, which reflects a shift in people's acceptance of the current state of affairs and adjusting to everyday challenges.

As banking operations resume on a more regular basis, for the first time since surveys began, cash is not the most common payment method when retailers are buying inputs and instead it's the in-person bank transfer (40 percent compared to 28 percent last year). However, when it comes to selling inputs to clients, bank transfers have sharply declined from 16 percent last year to near zero percent this year and credit (late payment) has become more common with both buying and selling (Figure 4).

Figure 4. Transaction method used by input retailers for buying and selling, by survey round common sample (N=153), percentage of transactions



Sources: Agricultural input retailer phone survey–August 2023, and July 2022 rounds

Challenges with credit lent out to farmers are another prevalent disruption in July 2023 with 46 percent of input retailers reporting difficulty recovering repayment from farmers and 32 percent reporting increased farmer demand for credit (Figure 2). Credit has been a compounding challenge in Myanmar's agrifood system since COVID-19, and it shows signs of improvements compared to last year. Sixty-seven percent of the sample lent cash or inputs on credit to farmers in the 2023 monsoon season, which is an increase from 51 percent in 2022 (Table 2). Although fewer retailers report increased demand from farmers for credit out relative to last year (Figure 2), market stability and higher input sales may allow retailers to offer credit to more farmers. Conditional median amounts of credit lent out have also increased. Similarly, the share of retailers taking in credit increased in the 2023 monsoon season to just over 38 percent, up from 25 percent in 2022. As the monsoon harvests come in, repayment issues on credit lent to farmers will hopefully lessen. Most retailers with credit lent out to farmers (93 percent) expect to be fully repaid within six months (by the winter season or post-monsoon season). Likewise, all the input retailers (100 percent) with credit taken in expect to fully repay within six months.

Table 2. Monsoon season credit out and credit in, 2023 and 2022

	Credit lent out to farmers		Credit taken in by retailers	
	2023	2022	2023	2022
Share providing/receiving (%)	67	51	38	25
Conditional total value ('00,000 MMK)				
Average	829	953	853	1513
Median	200	100	300	350

Sources: Agricultural input retailer phone survey– August 2023 and July 2022 rounds

Changes in inputs sales and prices

To give a sense of farmer input use, we asked input retailers which inputs they have sold during the monsoon season and how sales quantities compare to the previous monsoon season (decreased, increased, or similar). Table 3 shows that the shares of input retailers carrying fertilizers has increased, with the exception of lime or gypsum. Among those selling, sales quantity changes vary with 19-37 percent reporting increases and 20-33 percent reporting decreases. Seeds show significant declines in the shares of input retailers selling and maize seed sales quantities also appear to have declined. This reflects difficulties importing certain varieties as the share of maize seed from Thailand declined by 13 percent, those from China declined by 25 percent, while Myanmar produced maize seed sources increased by 80 percent. Retailers cited inflation and border closures along with lower farmer acreages as reasons for changes in seed sales. Agrochemical sales appear mostly stable.

Table 3. Inputs sold and year-on-year changes in sales quantities

Input	Share selling			Conditional change in sales volume		
	2023	2022	Change	Decrease	Same	Increase
<i>Fertilizers</i>						
Urea (%)	85	77	8	27	38	35
Ammonium sulphate (%)	25	18	8	23	48	30
Compound fertilizer (%)	83	72	12	25	43	32
T-super (%)	24	16	8	32	55	13
Potash (%)	18	12	5	33	48	19
Lime-gypsum (%)	23	42	-19	20	43	37
Organic fertilizer (%)	12	10	1	33	44	22
<i>Seeds</i>						
Rice seed (%)	11	18	-8	41	35	24
Maize seed (%)	13	25	-11	40	40	20
Vegetable/fruit seed (%)	18	28	-10	18	64	18
<i>Chemicals & equipment</i>						
Herbicides (%)	68	71	-3	27	49	24
Pesticides (%)	61	54	7	21	55	23
Farming Equipment (%)	16	43	-27	26	48	26

Source: Agricultural input retailer phone survey–August 2023 round.

Fertilizer is hugely important for Myanmar's rice and hybrid maize production systems and global prices have experienced extreme shifts since early 2022. Table 4 presents the changes in median prices of urea and compound fertilizers between the 2022 and 2023 monsoon seasons. In nominal terms, urea prices declined by an average of 7 percent between the 2022 and 2023 monsoon seasons. Compound prices increased by 14 percent overall over that same period. However, the broader economy has changed markedly over that period. To put the fertilizer prices in context we also calculate percentage changes relative to the changes in prices of rice – both a main crop for farmers and the staple food. Relative to rice prices which have increased markedly, prices of both fertilizers fell: urea prices fell by half and compound prices by 38 percent. Thus, expected returns to fertilizer use in rice production have increased. The directions and magnitudes of price changes are generally similar across the three AEZs in our sample, with the exception of compound fertilizer in the Hills which declined by 1 percent compared to 20 percent increases in the Delta and Dry Zone.

As we observed with seed sources, there is a decline in the share of urea sales types that originate from Thailand (-27 percent) and China (-12 percent). Retailers attributed the prices to import reductions (11 percent), inflation (26 percent), and political instability (38 percent).

Table 4. Year-on-year changes in fertilizer prices in levels and relative to rice prices, by agro-ecological zones

	All	Delta	Dry zone	Hills
<i>% change in prices in MMK</i>				
Urea	-7	-8	-10	-5
Compound	14	22	20	-1
<i>% change in prices relative to rice</i>				
Urea	-50	-53	-58	-48
Compound	-38	-38	-45	-46

Sources: Agricultural input retailer phone survey–August 2023 round; Rice millers phone survey – July 2022 and July 2023 rounds.
Notes: Changes calculated using median sales prices. Rice prices used in calculations are prices of milled Emata rice by AEZ.

Input retail sector changes 2013-23

Lastly, to understand how the input retail landscape has evolved over time we asked respondents a series of recall questions asking how their operations have changed from 10 years ago and before COVID-19 to now. Results generally show growth in important areas. About half of input retailers reported higher fertilizer sales in 2023 relative to both 2013 and 2019, though about a third report lower sales in the same periods. Insecticide sales show more mixed changes with 44 percent reporting higher sales quantities in 2023 than in 2013, and 41 percent reporting lower sales.

Credit provision to farmers shows clear increases in both periods with about half of the retailers increasing their credit value lent out in 2023 relative to both earlier years, and only 19 percent reporting declining values of credit provided. Competition in the input retail sector has also increased as the average number of other input sellers in retailers' village tracts of wards increased from 3.9 in 2013 to 5.9 in 2019 and 7.5 in 2023. The share belonging to social media groups related to agricultural inputs increased by 7 points to 11 percent between 2013 and 2019 but has remained flat since 2019.

Table 5. Evolution of input retail sector, 2013-23

	2013	2019	2023
<i>Change in fertilizer sales compared to year</i>			
Higher in 2023 (%)	51	47	
Same (%)	14	22	
Lower in 2023 (%)	35	31	
<i>Change in insecticide sales compared to year</i>			
Higher in 2023 (%)	44	43	
Same (%)	14	24	
Lower in 2023 (%)	41	33	
<i>Change in value of credit out compared to year</i>			
Higher in 2023 (%)	51	45	
Same (%)	31	36	
Lower in 2023 (%)	19	19	
N other input sellers in your VT/ward	3.9	5.9	7.5
Belong to social media groups about inputs (%)	4	11	10

Source: Agricultural input retailer phone survey–August 2023 round.

Looking forward

The input retail sector has seen several positive changes over the past 12 months. The percentage of input retailers reporting disruptions such as transport restriction, increased transportation costs, access to fuel, and high price of fuel has declined compared to July 2022. Over this same period, the percentage of retailers reporting lower input demand and farmers demanding more credit has also declined. Banking operations have also resumed on a more regular basis, and in-person bank transfer is now the most common method of payment for retailers buying inputs. Lastly, the price of fertilizer relative to rice declined, and more retailers reported carrying fertilizer. These changes provide a positive outlook for the agriculture sector in monsoon 2023.

However, this optimism may be subdued by a higher reporting rate of import disruptions experienced in 2023 compared to 2022 and 2021. Since Myanmar imports a large share of its fertilizers and pesticides, if these import challenges continue, it could negatively affect input availability in the upcoming seasons. Already in 2023, more than half of retailers could not acquire an input they wanted to sell. There are also declines in access to utilities and infrastructure such as electricity and cellphone communications.

Another concerning trend is that more input retailers reported challenges with recovering credit lent out to farmers. Also, they reported that more farmers were buying inputs on credit in 2023 compared to 2022. These are signs of farmers facing cash constraints and their incomes not fully recovered. As monsoon harvests come in, farmers will be able to recover their input costs and pay back creditors so long as they are able to access the lucrative export markets. If cash constraints continue, cash transfer programs could help alleviate these constraints and help farmers recover from the income shock they have experienced over the past three years.

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