MYANMAR

STRATEGY SUPPORT PROGRAM RESEARCH NOTE 100 SEPTEMBER 2023

Myanmar Agricultural Performance Survey (Dry Season 2023):

Farm commercialization

Key Findings

This Research Note presents the results from an assessment of farm commercialization in Myanmar after the dry season of 2023, based on data from a phone survey – the Myanmar Agriculture Performance Survey (MAPS) – that was conducted with 5,001 crop farmers in all states/regions of the country, over the period June – July 2023. It is found that:

- The security situation is worrisome for farmers. Almost a quarter of the farmers reported feeling 'very insecure' or 'insecure' during the period of the interview.
- Agricultural inputs were mostly available during the 2023 dry season period. However, it was difficult to access labor for 17 percent of the farmers. Conflict-affected areas suffered substantially more from labor availability problems.
- Input prices during the dry season of 2023 increased compared to the same period in 2022 by 14 percent for urea, 19 percent for mechanization, and 15 and 22 percent for hired labor of men and women, respectively.
- Farmgate prices are mostly on the rise compared to a year earlier. Paddy prices increased by 69 percent. Other farm prices showed mostly lower price increases. In the case of pulses, black gram increased by 21 percent and green gram by 19 percent. In the case of oilseeds, sesame increased by 38 percent and groundnut by 33 percent.
- The high price increases in the case of paddy and oilseeds – higher than input costs – reflect increased profitability for these farmers. However, that is not the case of other crops.
- Most farmers reported higher crop sales income this year compared to last. Farms affected by cyclone Mocha and farms in insecure areas however reported relatively more crop sales income decreases than other farmers.

Recommended Actions

- The increasing insecurity in the country is hampering the functioning of agricultural markets (leading to lower availability of agricultural inputs and lower incomes). An improved security situation is therefore critical.
- As cyclone Mocha has reduced, among others, incomes of a large number of farmers in Rakhine and the Dry Zone, assistance of these cyclone-affected farmers is needed.

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Introduction

This Research Note presents the results from an assessment of farm commercialization in Myanmar after the dry season of 2023. The results are based on data from a phone survey – the Myanmar Agriculture Performance Survey (MAPS) – that was conducted with 5,001 crop farmers in all states/regions of the country in Q3 of 2023. This note assesses the perceived security situation of crop farmers, agricultural input availability and prices, prices of major crops at the farm level, changes in income from crop sales, and overall crop marketing challenges.

Data and method

The MAPS is a sub-sample of households interviewed during the fifth round of the Myanmar Household Welfare Survey (MHWS) (MAPSA 2023a), which was fielded in the second quarter of 2023. In the MHWS, information was collected on the background of these households, welfare indicators, and livelihoods (MAPSA 2023a). The follow-up MAPS focused on the agricultural activities of crop farmers during the dry season of 2023.[1] The survey was implemented from June 26th until July 25th, 2023. The number of crop farmers interviewed in MAPS are reported by state and region in Table 1 and are shown by township in Figure 1.

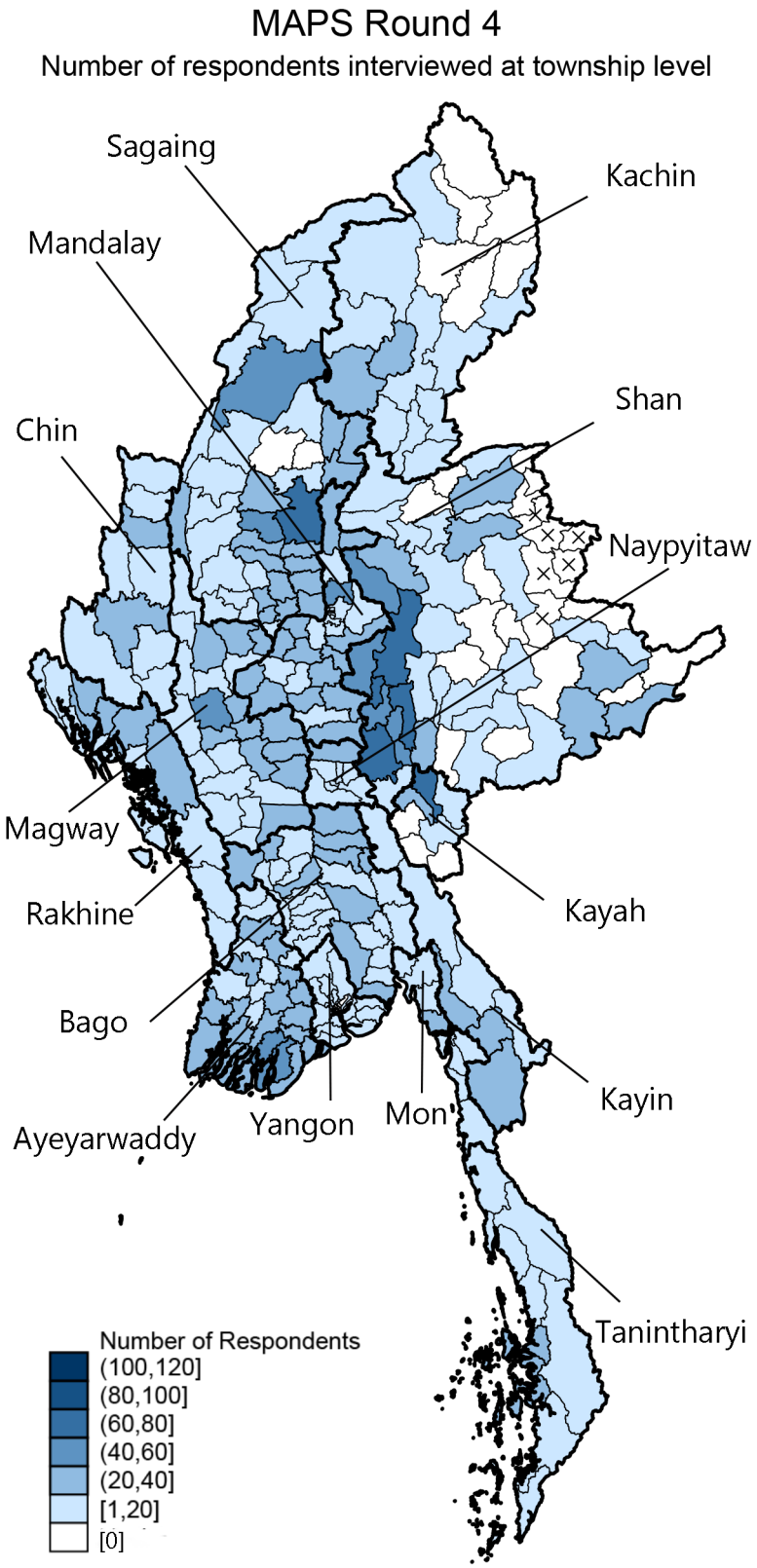
Table 1: Sample crop farmers, MAPS dry season 2023

	MAPS R4
Kachin	157
Kayah	105
Kayin	122
Chin	117
Sagaing	744
Tanintharyi	131
Bago	509
Magway	488
Mandalay	539
Mon	143
Rakhine	242
Yangon	155
Shan	824
Ayeyawady	644
Nay Pyi Taw	81
Total	5,001

Source: Authors' calculations based on MAPS, dry season 2023

[1] Covering the monsoon period, typically crops that are harvested between September and January.

Figure 1: Sample crop farmers, MAPS dry season 2023



Source: Authors' calculations based on MAPS, monsoon season 2022

To assure that crop farmers are representative of the crop farming population in their state or region, a weighting factor was calculated building on the method used for the MHWS (for details, see MAPSA 2022a). The MAPS collected information on household characteristics, overall area cultivated, crops grown, security problems, input use and farm management practices, yields, sales, output prices, and marketing behavior. Table 2 provides background statistics on the surveyed

farmers. We divide the country into four major agro-ecological zones that are commonly used in Myanmar and present our results at this level.[2]

During the 2023 dry season, 3,460 of the contacted farmers reported cultivating crops. The average cultivated area during the dry season was 4.2 acres (the median was 3.0 acres). Nineteen percent of crop farmers in Myanmar grew paddy during the dry season of 2023. As many as 32 percent of the farmers in the Delta Zone and 15 percent of the farmers in the Dry Zone grew rice. Other important crops grown during the dry season are green gram (12 percent of farmers), black gram (11 percent), sesame (7 percent) and betel leaves (7 percent). Groundnut and sesame were especially important in the Dry Zone where 11 and 18 percent of the farmers grew these crops respectively. Betel leaves were important in the Delta, with 10 percent reporting growing that crop as well as in the coastal areas (20 percent of the farmers were growing).

Table 2: Descriptive crop farmers, MAPS dry season 2023

	Unit	National	Hills	Dry	Delta	Coastal
Total number of farmers	Number	3,460	785	1,238	1,205	232
Area cultivated - acres	Mean	4.20	3.14	3.68	5.43	3.52
Area cultivated - acres	Median	3.00	2.00	3.00	4.50	2.50
Crops grown in post-/pre-monsoon 2023						
Rice	% of farmers	19.1	7.0	15.4	32.1	6.6
Green gram	% of farmers	11.8	0.8	15.3	17.1	0.6
Black gram	% of farmers	10.7	0.5	5.2	23.6	1.7
Sesame	% of farmers	6.8	0.8	18.5	0.7	0.0
Groundnut	% of farmers	6.4	4.5	11.0	2.1	12.6
Betel leaves	% of farmers	6.7	0.5	7.2	9.7	8.4
Banana	% of farmers	6.0	3.8	5.4	7.8	6.8
Betel nut	% of farmers	4.4	0.6	0.8	7.3	19.7
Chili (fresh)	% of farmers	4.5	5.9	3.8	2.7	13.3
Chickpea	% of farmers	4.4	1.1	10.9	0.9	0.6
Mango	% of farmers	4.1	4.6	5.8	2.7	1.1
Tomato	% of farmers	4.0	12.2	2.3	0.8	4.1
Long bean	% of farmers	3.9	4.6	1.3	5.7	4.4
Pigeon pea	% of farmers	3.2	2.5	7.3	0.1	0.9
Rubber	% of farmers	2.3	3.5	0.1	2.4	9.3

Source: Authors' calculations based on MAPS, dry season 2023

Insecurity and agriculture

Farmers were asked perceptions on insecurity in the area that they reside in. The question was asked in the middle of the year 2023 - to crop farmers that cultivated during the dry season period - as well as during previous rounds of MAPS. At the national level, we see a worsening in the perceptions of security by farmers since the first round of MAPS which was conducted for the monsoon season. While 82 percent of the farmers indicated that they were living in a 'secure' or 'very secure' situation in the beginning of the year 2022, that share declined to 76 percent of the farmers a year and a half later – we note a slight improvement though compared to the situation in January/February 2023 (Table 3). There is a worsening in most agro-ecological zones but the biggest increase in these perceptions of insecurity was noted in the Dry Zone where the share of farmers that indicated that they were residing in a 'secure' or 'very secure' area declined by 4 and 13 percentage points respectively between round 1 (December 2021 – February 2022) and round 4 (June/July 2023) (Table 3).

[2] Delta (Ayeyawaddy, Bago, Mon, Yangon); Coastal (Rakhine, Tanintharyi); Central Dry (Mandalay, Magwe, NPT, Sagaing); Hills and Mountains (Chin, Kachin, Kayah, Kayin, Shan).

Table 3: Perceptions of insecurity in the area that the farmer resides in, share of farmers (%)

	Unit	National	Hills	Dry Zone	Delta	Coastal
December 2021 - February 2022						
Very insecure	%	3.7	4.8	3.5	2.1	6.6
Somewhat insecure	%	14.2	19.2	11.9	11.3	20.4
Secure	%	43	47.4	38.3	46.6	36.1
Very secure	%	38.5	28.1	45.6	40	34.9
Prefer not to answer	%	0.6	0.6	0.8	0	2
Total	%	100.0	100.0	100.0	100.0	100.0
August/September 2022						
Very insecure	%	9.8	10.5	9.8	5.2	29.7
Somewhat insecure	%	17.5	21.7	20.3	11.4	18.5
Secure	%	35.3	35.2	30.9	39.9	35.6
Very secure	%	36.5	32.0	38.2	41.9	16.1
Prefer not to answer	%	0.9	0.6	0.8	1.5	0.0
Total	%	100.0	100.0	100.0	100.0	100.0
January - February 2023						
Very insecure	%	9.1	8.2	12.5	5.9	9.1
Somewhat insecure	%	18.0	22.6	20.4	12.2	13.9
Secure	%	36.2	38.4	31.9	38.4	39.5
Very secure	%	36.1	29.7	34.8	42.8	36.8
Prefer not to answer	%	0.7	1.1	0.4	0.6	0.8
Total	%	100.0	100.0	100.0	100.0	100.0
June - July 2023						
Very insecure	%	5.4	5.0	8.9	2.2	6.7
Somewhat insecure	%	18.7	19.9	23.3	14.3	16.2
Secure	%	35.7	37.7	34.5	34.5	41.6
Very secure	%	39.9	36.9	32.8	48.9	34.9
Prefer not to answer	%	0.4	0.4	0.5	0.2	0.7
Total	%	100.0	100.0	100.0	100.0	100.0

Source: Authors' calculations based on MHWS, round 1 and MAPS, rounds 2 and 3.

Feelings of insecurity might have important implications on farm activities as farmers might forego travelling to buy inputs or sell outputs or might not cultivate their land all together. Fifteen percent of the farmers indicated that they could not move around without serious concerns for security at the time of the survey, a high number but an improvement compared to previous surveys (Table 4). Concerns on mobility were the highest in the Dry Zone and Coastal areas. Farmers were also asked if fields were not cultivated or if fields were burnt or destroyed or not harvested because of conflict in their area. At the national level, 8 and 5 percent, respectively, of the farmers indicated that this was the case in their area during the dry season of 2023. This was most often reported in the Dry Zone and Coastal areas.

Table 4: Insecurity, mobility and agriculture, share of farmers (%)

	Unit	National	Hills	Dry Zone	Delta	Coastal
Cannot move around without serious concern for security						
March 2022	%	20.3	22.0	23.4	16.7	14.7
August-September 2022	%	24.8	20.9	31.1	15.7	47.2
February-March 2023	%	22.8	20.0	29.4	18.0	20.6
June-July 2023	%	15.2	14.6	19.8	10.1	22.0
Crops or field were burnt or destroyed or not harvested because of conflict in the farmers' area						
February-March 2023	%	4.2	3.6	6.8	1.0	6.9
June-July 2023	%	5.2	4.1	9.2	1.4	9.3
Fields were not cultivated in my area because of conflict						
February-March 2023	%	8.6	9.2	12.4	2.0	15.2
June-July 2023	%	7.6	6.6	12.5	2.8	11.9

Source: Authors' calculations based on MAPS, rounds 1, 2 and 3

Agricultural input availability and prices

We next explore to what extent there were problems in the country related to the availability of different agricultural inputs used during the dry season. Farmers were asked if they could not find any or enough of a number of agricultural inputs. No large problems of availability were reported nationally and in most of the country agricultural inputs were readily available (Table 5). At the national level, 2 percent of the farmers reported that they could not find - or there was not enough - chemical fertilizer, an improvement compared to the monsoon period when 7 percent of the farmers indicated that they could not find (enough) fertilizer. There were also relatively few problems of availability reported for seeds, pesticides, and mechanization. However, availability of labor was a larger issue. Seventeen percent of the farmers reported having problems finding enough laborers. Input availability problems were overall larger in the Hills compared to the rest of the country.

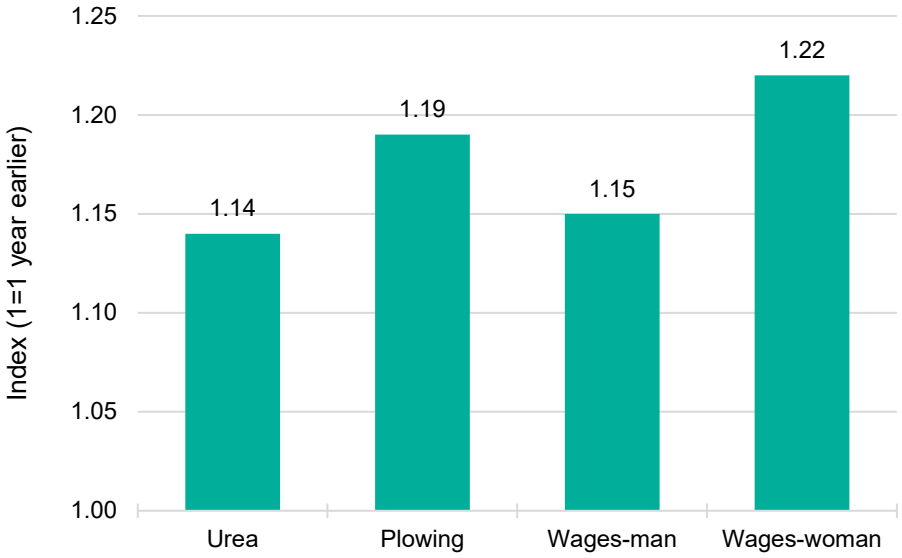
Table 5: Reported problems of availability of agricultural inputs (not available or not enough available) – Dry season 2023

	Unit	National	Hills	Dry Zone	Delta	Coastal
Chemical fertilizer	%	1.8	2.5	2.2	1.2	1.5
Seeds	%	3.3	5.3	3.3	2.2	2.8
Pesticides	%	1.5	2.2	1.1	1.5	1.1
Mechanization	%	3.8	5.3	2.0	4.5	4.6
Labor	%	17.1	20.1	12.8	20.0	14.0

Source: Authors' calculations based on MAPS, monsoon season 2022

Farmers were also asked about the prices of agricultural inputs and how they evolved over the last year (comparing monsoon season periods). We note increases in these input costs over the last 12 months. Prices of urea – the most important fertilizer used in the country – increased by 14 percent (Figure 2). We also see increases in the price of mechanized plowing (+19 percent). Further, while agricultural wages had changed little over previous years, we however note bigger changes in the last year. Wages of casual laborers increased by 15 percent for men and 22 percent for women (in nominal terms).

Figure 2: Price changes of agricultural inputs in the dry season of 2023 (price one year earlier = 1)



Source: Authors' calculations based on MAPS, monsoon season 2022

Crop prices

The survey requested information about farmgate prices at the time of the survey. We compare these prices with the one recorded about a year earlier as well as prices at the end of the monsoon of 2022. Table 6 shows that average paddy prices increased by 69 percent compared to last year while median prices increased by 60 percent. This high price increase in rice markets is seemingly linked to international price changes, to lower domestic production (MAPSA 2023c), as well as to the depreciation of the Kyat. We also see substantial price increases for almost all non-paddy crops. Large increases are seen for sesame (+38 percent) and groundnut (+ 33 percent). As palm oil became rationed in the country (MAPSA 2022b), prices of local vegetable oils, often processed from sesame and groundnut, have increased rapidly as local oils are a substitute for palm oil. Prices of pulses – mostly exported to India – have also risen. They increased by 21 percent for black gram and 19 percent for green gram. We see negative price changes for betel leaves and betel nuts compared to the monsoon period, possibly because of reduced imports by Bangladesh. The high price increases in the case of paddy and oilseeds – higher than input costs – reflect increased profitability for those farmers. However, that is not the case for betel leaves and betel nuts.

Table 6: Prices for main non-rice crops, June/July 2023 compared to one year earlier (MMK/kg)

	Unit	Dry Season '22 Aug./Sept. '22 (1)	Monsoon '22 Feb/March 2023 (2)	Dry Season '23 June/July 2023 (3)	Changes (3) compared to (1) (in %)	(2) (in (%)
Paddy	Mean	468	685	789	68.6	15.1
	Median	478	670	766	60.2	14.3
Black gram	Mean	1,790	1,651	2,167	21.1	31.3
	Median	1,835	1,682	2,171	18.3	29.1
Green gram	Mean	1,529	1,595	1,815	18.7	13.8
	Median	1,468	1,529	1,779	21.2	16.4
Sesame	Mean	3,086	3,201	4,269	38.3	33.4
	Median	3,061	3,265	4,204	37.3	28.7
Groundnut	Mean	1,773	1,975	2,366	33.5	19.8
	Median	1,754	1,930	2,193	25.0	13.6
Betel Leaves	Mean	2,441	6,075	2,988	22.4	-50.8
	Median	2,454	6,135	3,067	25.0	-50.0
Betel Nut	Mean	-	5,541	4,865	-	-12.2
	Median	-	4,908	4,141	-	-15.6

Source: Authors' calculations based on MAPS, round 2, 3, and 4

Crop marketing and challenges

Table 7 presents the share of farmers that tried to sell crops during the dry season of 2022 and 2023, the main crop they wanted to sell, and the challenges encountered during marketing. Most farmers tried to sell their dry season crops and we see almost no difference over the last two seasons (89 and 88 percent in 2022 and 2023 respectively). Rice was the top crop that farmers wanted to sell – 19 percent of the farmers indicated that this was their main sales crop during the dry season. Other main crop categories mentioned were pulses and oilseeds, the most important crops being green gram (12 percent), black gram (11 percent), groundnut (6 percent), and sesame (6 percent).

We see substantial variation in main crops sold over agro-ecological zones. Rice was the most important main sales crop in the dry season of 2023 in the Delta (as reported by 32 percent of the farmers). Green gram (17 percent) and black gram (23 percent) were also relatively important. Rice was relatively much less important in the Hills and Coastal regions where only 7 percent of farmers indicated it as their main crop for sales. Tomato and betel nuts were reported as the most important crop in the Hills and Coastal regions, respectively. While rice was an important crop for marketing in the Dry Zone (15 percent), sesame (18 percent), green gram (15 percent) and groundnut (11 percent) were also relatively important.

Farmers were further asked if they had faced challenges selling crops after the dry seasons of 2022 and 2023 and if so, what type of challenges. After the dry season of 2023, 12 percent of farmers indicated that they had faced challenges marketing crops whereas a higher share - 18 percent - reported difficulties following the 2022 dry season. Farmers in the Hills and the Coastal areas reported the most challenges of all agro-ecological zones. Of those that reported challenges, low prices for crops were mentioned as a major challenge by 65 percent of farmers for the last dry season, less than the year before (71 percent). This is likely because of increases in farmgate prices this dry season. A main challenge this dry season is also high prices of fuel and transportation costs, complicating the marketing of crops. Fifty-two percent of the farmers reported that as an important challenge this year compared to only sixty-four percent last year. That challenge was especially mentioned by farmers in the Dry Zone. Insecurity during travel was also an important issue for some farmers, especially in the Dry Zone.

Table 7: Sales of crops and challenges, share of farmers (%)

		2022	2023				
	Unit	National	National	Hills	Dry Zone	Delta	Coastal
Tried to sell crop of post-/pre-monsoon harvest	% yes	88.9	87.9	84.2	85.1	93.7	81.3
Main crop that they tried to sell							
Rice	%	16.7	19.1	7.0	15.4	32.1	6.6
Green gram	%	8.7	11.8	0.8	15.3	17.1	0.6
Black gram	%	8.0	10.7	0.5	5.2	23.6	1.7
Sesame	%	6.0	6.8	0.8	18.5	0.7	0.0
Groundnut	%	5.3	6.4	4.5	11.0	2.1	12.6
Betel leaves	%	4.2	6.7	0.5	7.2	9.7	8.4
Banana	%	1.4	6.0	3.8	5.4	7.8	6.8
Betel nut	%	1.4	4.4	0.6	0.8	7.3	19.7
Chili (fresh)	%	2.8	4.5	5.9	3.8	2.7	13.3
Chickpea	%	2.1	4.4	1.1	10.9	0.9	0.6
Mango	%	0.5	4.1	4.6	5.8	2.7	1.1
Tomato	%	2.4	4.0	12.2	2.3	0.8	4.1
Long bean	%	1.0	3.9	4.6	1.3	5.7	4.4
Pigeon pea	%	1.1	3.2	2.5	7.3	0.1	0.9
Rubber	%	1.8	2.3	3.5	0.1	2.4	9.3
Other crops	%	36.6	36.3	67.5	32.8	22.7	42.2
Challenges faced during marketing	% yes	17.6	11.6	16.9	11.1	8.8	14.5
Type of challenges							
Low prices for crops	% yes	71.0	64.6	71.6	56.7	63.3	76.2
High price of fuel / high transportation cost	% yes	64.5	51.8	45.5	70.8	35.6	61.5
Payment problems	% yes	23.7	18.2	19.0	17.5	13.2	38.0
Have to sell crops on credit	% yes	28.5	26.0	24.6	22.2	27.7	39.7
Markets are closed	% yes	25.9	20.7	19.8	23.7	15.8	31.3
Not many traders	% yes	46.0	43.1	36.9	53.5	36.7	48.7
Buyers or traders cannot reach the farm or I cannot reach them	% yes	50.1	44.8	35.5	63.3	35.5	39.9
Insecurity during travel	% yes	32.5	34.6	34.3	56.4	12.6	33.0

Source: Authors' calculations based on MAPS, monsoon season, 2021 and 2022

We asked farmers to estimate their overall sales income from crop farming at the time of the survey compared to the same time a year earlier (Table 8). Strong heterogeneity is seen in the stated evolution of crop sales income. The majority (65 percent) of the farmers indicated that they had higher sales income this year compared to the same period last year. Thirty percent of the crop farmers reported an income that was "much higher" (more than 20 percent) while 34 percent indicated a higher income (between 1 and 20 percent). On the other hand, 15 percent of the farmers reported a lower income compared to last year while 20 percent indicated no change. The share of farmers indicating significantly higher incomes is especially high in the Delta, likely reflecting the relatively higher importance of paddy in crop sales in this area (because of significant price increases of paddy over the last year).

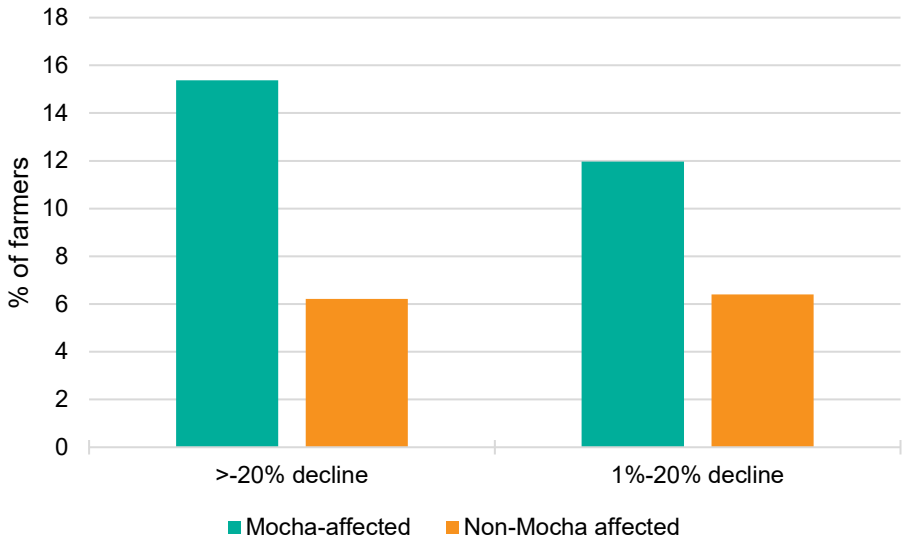
Table 8: Stated evolution of sales income from crop farming, dry season 2023 compared to the dry season 2022, share of farmers (%)

	Unit	National	Hills	Dry Zone	Delta	Coastal
Much lower now (by 20% or more)	%	7.6	8.6	6.9	6.9	11.8
Somehow lower now (between 1% and 20% lower)	%	7.2	9.4	7.9	4.9	10.6
About the same now	%	20.3	27.6	18.3	17.9	22.9
Somehow higher now (between 1% and 20% higher)	%	34.5	31.3	34.0	36.1	37.2
Much higher now (by 20% or more)	%	30.4	23.1	32.8	34.2	17.5
Total		100.0	100.0	100.0	100.0	100.0

Source: Authors' calculations based on MAPS, monsoon season 2022

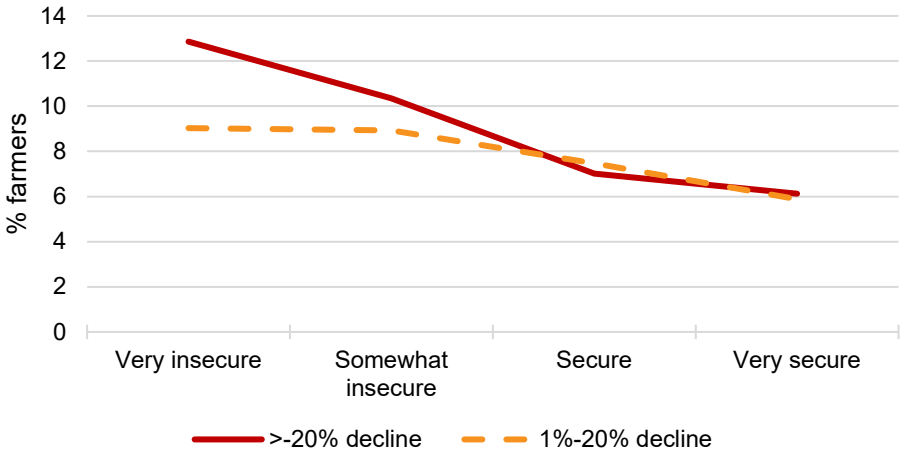
To better understand this differential change in sales income for different groups of crop farmers, we cross-tabulate with two important factors, i.e., the effect of cyclone Mocha and perceived physical insecurity levels. First, cyclone Mocha – one of the strongest cyclones ever recorded in Myanmar – made landfall in Myanmar in the middle of May causing significant damage in Rakhine and part of the Dry Zone. 13 percent of farmers in MAPS indicated that their agricultural production had been affected by the cyclone (MAPSA 2023b). If they indicated impacts, we also asked them to assess the losses caused by the cyclone. 20 percent of the affected farmers - representing 3 percent of all farmers - indicated that they lost their whole harvest. In Figure 4, we present to what extent the Mocha-affected farmers reported a decline in sales income in 2023 compared to the previous dry season. Fifteen and 12 percent of the Mocha affected farmers indicated a decline in sales income of more than 20 percent and between 1 and 20 percent, respectively. This compares to 6 percent for each of these categories for the non-Mocha affected households. Second, farmers in insecure areas have experienced more declines in crop sales income. 13 percent of the most insecure farmers saw a decline of crop sales income by 20 percent or more (Figure 5). This compares to only 6 percent for the most secure farmers.

Figure 4: Change in sales income, by effect of cyclone Mocha, share of farmers (%)



Source: Authors' calculations based on MAPS, monsoon season 2022

Figure 5: Change in sales income, by reported level of physical security, share of farmers (%)



Source: Authors' calculations based on MAPS, monsoon season 2022

Conclusions

Insecurity is affecting agriculture as shown by a substantial number of farmers feeling insecure and reporting not bing able to move around - to buy input or sell outputs - without serious concerns for their security. Agricultural inputs were mostly available during the dry season but there is increasing scarcity of agricultural labor – seemingly linked to increasing migration and insecurity. We note price increases for agricultural inputs as well as for crop prices. The high price increases in the case of paddy and oilseeds – higher than input costs – reflect increased profitability for these farmers. However, that is not the case for most other crops grown. Most farmers reported higher crop sales income this year compared to last. Farms affected by cyclone Mocha and farms in insecure areas however reported relatively more crop sales income decreases than other farmers.

The findings in this research note have several implications. First, the increasing insecurity in the country is hampering the functioning of the agricultural sector (leading to lower incomes in insecure areas). An improved security situation is therefore critical. Second, cyclone Mocha has reduced, among others, incomes of a large number of farmers in Rakhine and the Dry Zone. Assistance for these cyclone-affected farmers is therefore needed.

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