

Monitoring the Impact of COVID-19 in Myanmar

Yangon peri-urban poultry farmers – November 2020 survey round

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Key findings

- Due to the second wave of COVID-19 in Myanmar, which started in September 2020, demand for broilers and eggs has decreased again; around 60 percent of broiler farms and 40 percent of layer farms reported decreases in demand.
- Broiler prices decreased to a historical low of 1,650 MMK/Viss in mid-September. Egg prices also decreased by 12 percent in October.
- Poultry farms reduced their operational capacity in September in response to this decline in demand, but increased their operational capacity slightly in November. Integrated layerfish farms were more resilient to economic shocks than non-integrated layer farms.
- The PMI revenue index decreased by more than 70 percent for broiler and layer farms between August and November due to the second wave of COVID-19 and the subsequent decline in demand. Accordingly, cash flow worsened for both broiler and layer farms.
- As stringent lockdown measures were imposed in September, logistic disruptions once again became a major challenge to accessing inputs and selling products.

Recommended actions

- Most prior policy recommendations supporting peri-urban poultry farmers still stand:
 - Prolong or expand income support to vulnerable households;
 - Encourage participation in government credit guarantee schemes; increase awareness of these loan programs among poultry farmers;
 - Provide temporary income support to poultry farms;
 - Allow tax exemptions or deferrals; and
 - Lift restrictions on transportation of agricultural products; allow more "green lanes" for trucks transporting agricultural products to decrease transportation time and costs.
- Additionally, frequently assess the performance of poultry markets. Consider whether to again lift the import ban on day-old-chicks in coming months.
- Facilitate the Yangon Broiler Farmers Association's efforts to organize mobile poultry selling across townships in Yangon to increase consumer access to poultry products and to help prevent disease transmission through traders adopting safe and controlled sales practices.

Introduction

Poultry farmers in Myanmar were interviewed by telephone in early June, late June, early July, late July, and August 2020 to determine how their businesses were being affected by COVID-19 related restrictions. The results of those surveys were published in Myanmar Strategy Support Program Policy Notes <u>11</u>,¹ <u>13</u>,² <u>19</u>,³ <u>21</u>⁴, and <u>28</u>⁵, respectively. To trace the continuing impact of the COVID-19 pandemic on their economic activities, a sixth round of the phone survey of poultry farmers was done in November 2020. The sixth round sample included 226 poultry farmers (162 broiler and 64 layer farms) in the Yangon peri-urban area (Ayeyarwady, Bago, and Yangon regions) who had been interviewed in the first five rounds of the survey.⁶ The same survey questionnaire was used. This survey round is three months after the August survey round, so most broiler farms should have finished a full production cycle between the two last survey rounds. This Policy Note reports on the results of this sixth survey round.

The second wave of COVID-19, which began in September, hit Myanmar hard with stringent infection control measures again being implemented. According to IFPRI's COVID-19 Rural and Urban Food Security Survey, income-based poverty rose at an alarming rate between August and October 2020.⁷ Food insecurity rose sharply, while maternal dietary diversity fell significantly – the share of mothers in urban and peri-urban Yangon with insufficiently diverse diets rose from 30 percent in June to around 50 percent between August and October. Another survey by IFPRI conducted in Myanmar's Dry Zone, found that around 40 percent of rural households consumed meat less frequently or in smaller portions than they had done so before the onset of COVID-19, mainly due to pandemic-related reductions in household income.⁸ As chicken and eggs, with fish, are now the most important animal-source foods for low-income households in Myanmar and as the poultry sector in Myanmar continues to be volatile, it is important to continue to monitor the sector. Government should be ready to provide timely support to help stabilize the supply of broiler and eggs and to mitigate the adverse implications for nutrition and food security that would arise due to reduced chicken and egg consumption.

This Policy Note seeks to help the Ministry of Agriculture, Livestock and Irrigation (MOALI) of the Government of Myanmar and agricultural sector stakeholders to: (1) understand the challenges that poultry farms have faced since the outbreak of COVID-19; (2) learn about the adaptations and changes poultry farms are making in response to those challenges; and (3) track input procurement and marketing activities, including quantities and prices.

¹ Fang, P., B. Belton, Hnin Ei Win, Khin Zin Win, and X. Zhang. 2020. *Monitoring the Impact of COVID-19 in Myanmar: Yangon periurban poultry farmers – early June 2020 survey round*. IFPRI Myanmar Strategy Support Program Policy Note 11. Yangon: International Food Policy Research Institute (IFPRI).

² Fang, P., B. Belton, Hnin Ei Win, and X. Zhang. 2020. *Monitoring the Impact of COVID-19 in Myanmar: Yangon peri-urban poultry farmers – late June 2020 survey round*. IFPRI Myanmar Strategy Support Program Policy Note 13. Yangon: International Food Policy Research Institute (IFPRI).

³ Fang, P., B. Belton, Hnin Ei Win, and X. Zhang. 2020. Monitoring the Impact of COVID-19 in Myanmar: Yangon peri-urban poultry farmers – early July 2020 survey round. IFPRI Myanmar Strategy Support Program Policy Note 19. Yangon: International Food Policy Research Institute (IFPRI).

⁴ Fang, P., B. Belton, Hnin Ei Win, and X. Zhang. 2020. *Monitoring the Impact of COVID-19 in Myanmar: Yangon peri-urban poultry farmers – late July 2020 survey round*. IFPRI Myanmar Strategy Support Program Policy Note 21. Yangon: International Food Policy Research Institute (IFPRI).

⁵ Fang, P., B. Belton, Hnin Ei Win, and X. Zhang. 2020. *Monitoring the Impact of COVID-19 in Myanmar: Yangon peri-urban poultry farmers – August 2020 survey round*. IFPRI Myanmar Strategy Support Program Policy Note 28. Yangon: International Food Policy Research Institute (IFPRI).

⁶ 226 out of the 238 farms from the fifth round were interviewed in the sixth round of the poultry farmers survey.

⁷ Headey, D.; Oo, Than Zaw; K. Mahrt; X. Diao; S. Goudet; and I. Lambrecht. 2020. Poverty, food insecurity, and social protection during COVID-19 in Myanmar: Combined evidence from a household telephone survey and micro-simulations. Myanmar SSP Policy Note 35. Washington, DC: International Food Policy Research Institute (IFPRI).

⁸ Lambrecht, I., C. Ragasa, K. Mahrt, Z.W. Aung, and M. Wang. 2020. *Monitoring the Impact of COVID 19 in Myanmar: Agricultural production and livelihoods in two irrigation schemes – June 2020 survey round.* Myanmar Strategy Support Program Policy Note 20. Washington D.C.: International Food Policy Research Institute.

Effects of COVID-19 on poultry farmers

Only a very small number of broiler or layer farms shut down or reopened between September and November (Figure 1). Though the second wave of COVID-19 hit Myanmar hard, the overall operational status of poultry farms in peri-urban Yangon was stable between September and November. The share of operational broiler farms and layer farms in November both remained the same as in August, which are 81 and 83 percent, respectively (Table 1). It seems that those poultry farms that survived the first wave of COVID-19 remain sufficiently resilient to have dealt with the challenges from the second wave. However, it is important to note that the share of permanently closed broiler farms and layer farms continued to increase by 3 and 2 percent, respectively, between September and November.



Figure 1: Broiler and layer poultry farms closed and reopened by month, September 2019 to November 2020, number of farms surveyed

Source: 2020 Yangon peri-urban poultry farmer survey – first to sixth rounds.

Note: Our survey started in June, so we do not have data regarding farms reopening before June. However, farms were unlikely to reopen before June the demand for poultry products was very low at that time.

| Table 1 | : Operational | status of pou | try farms b | y survey r | round, p | percent of | farms surveye | be |
|---------|---------------|---------------|-------------|------------|----------|------------|---------------|----|
|---------|---------------|---------------|-------------|------------|----------|------------|---------------|----|

| | Broiler farms | | | | Layer farms | | | | | | | |
|--|---------------|--------------|---------------|--------------|-------------|-----|---------------|--------------|---------------|--------------|-----|-----|
| | early June | late June | early July | late July | Aug | Nov | early June | late June | early July | late July | Aug | Nov |
| Both integrated and non-integrated farms | | | | | | | | | | | | |
| Still in operation | 69 | 72 | 78 | 82 | 81 | 81 | 90 | 85 | 83 | 85 | 83 | 83 |
| Temporarily closed | 25 | 22 | 11 | 7 | 8 | 5 | 4 | 6 | 8 | 6 | 6 | 5 |
| Permanently closed | 6 | 6 | 11 | 11 | 11 | 14 | 6 | 9 | 9 | 9 | 10 | 12 |
| Integrated farms | | | | | | | | | | | | |
| Still in operation | 68 | 70 | 77 | 80 | 80 | 80 | 95 | 93 | 93 | 93 | 90 | 90 |
| Temporarily closed | 26 | 24 | 11 | 8 | 8 | 5 | 3 | 5 | 5 | 5 | 5 | 5 |
| Permanently closed | 6 | 6 | 12 | 12 | 12 | 15 | 3 | 3 | 3 | 3 | 5 | 5 |
| Non-integrated farms | | | | | | | | | | | | |
| Still in operation | 71 | 75 | 81 | 85 | 85 | 85 | 85 | 76 | 78 | 76 | 76 | 76 |
| Temporarily closed | 21 | 17 | 10 | 6 | 6 | 6 | 5 | 8 | 11 | 8 | 8 | 5 |
| Permanently closed | 8 | 8 | 8 | 8 | 8 | 8 | 10 | 16 | 11 | 16 | 16 | 18 |

Source: 2020 Yangon peri-urban poultry farmer survey - first to sixth rounds.

Integrated poultry-fish farms are common in Myanmar. Two-thirds of poultry farms in our sample are integrated with fish production. Integration of poultry with aquaculture facilitates low-cost production of fish, which may be sold strategically to smooth cash flow and incomes. Therefore, we hypothesize that integrated farms are more resilient to economic shocks than are non-integrated

farms. We compare the resilience of integrated and non-integrated farms by comparing their operational status and assume that farms able to remain open are more resilient to shocks than those that closed.

Integrated layer-fish farms appear to have been more resilient to the impact of both waves of COVID-19 on their business than non-integrated layer farms. No integrated layer-fish farms in the survey sample shut down since the second wave of COVID-19 hit Yangon. Ninety percent of the integrated layer-fish farms in the sample remained in operation in November, while only 76 percent of non-integrated layer farms did (Table 1). However, no significant difference was observed between the performances of integrated and non-integrated broiler farms in this regard. This lack of difference in broiler farms is likely due to key challenges specific to all broiler farms, such as shortages of day-old-chicks. For integrated broiler-fish farms, losses from these challenges may have exceeded the cash flow buffer provided by income from fish sales.

Besides changing operational status, poultry farms also adjusted their operational capacity to adapt to the supply and demand challenges caused by COVID-19, by, for example, adjusting the quantity of birds raised or prolonging the length of production cycles. Figure 2 shows that **both broiler and layer farms expanded their operational capacity between June and August but reduced it again in November**. Considering that the price of broilers increased considerably between September and November (Figure 3), the operational capacity of broiler farms was very likely lower in September and October than in November. While no differences are seen between integrated and non-integrated broiler farms, the operational capacity of non-integrated layer farms decreased more than integrated layer-fish farms (Figure 2). Whereas the operational capacity of non-integrated layer farms is lower in November compared with August, a change which is very likely due to the second wave of COVID-19, integrated layer-fish farms remained at the same level of operational capacity in November as in August. This is consistent with our finding that integrated layer-fish farms are economically more resilient, thanks to sales of fish.



Figure 2: Percentage change of operational capacity in poultry farms compared with 2019, monthly average level, by poultry type and integrated/non-integrated system

Source: 2020 Yangon peri-urban poultry farmer survey - first to sixth rounds.





Source: Authors' compilation based on the daily broiler and egg price posted on Facebook by Myanmar Livestock Federation and Silver Sea Journal. The price of day-old-chicks is based on the Yangon peri-urban poultry farmer survey (six rounds). Note: We did not present the price of layer day-old-chicks here because there are very few observations. Viss' is a traditional unit of mass in Myanmar equivalent to 1.63 kg. In early 2020, MMK 1,375 ≈ USD 1.00.

As demand for broiler was hit again by the second wave of COVID-19, the **price of broilers decreased in mid-September to a historical lowest of around 1,650 MMK/Viss (Figure 3)**. According to our interview with Myanmar Livestock Federation, as COVID-19 cases soared and broiler prices plummeted in September, poultry farms in peri-urban Yangon immediately reduced their operational capacity. However, the prices of broilers gradually recovered in October and November, indicating that poultry farms may have overreacted in their reduction of operational capacity in response to the demand decline in September. Another possible reason for the recent price increase is that broiler sales grew in October and November thanks to more mobile selling organized by the Union of Myanmar Federation of Chambers of Commerce and Industry and the Yangon Municipal Committee.⁹

As broiler farms reduced operational capacity in September, the demand for day-old-chicks also decreased dramatically. As a result, the price of day-old-chicks plummeted in September from over 700 MMK/chick to below 300 MMK/chick. To stabilize the price of day-old-chicks and protect domestic breeder farms, the Livestock, Breeding, and Veterinary Department (LBVD) of MOALI suspended imports of day-old-chicks from 1 October, which is aligned with our recommendation in Policy Note 21. In November, the price of day-old-chicks rose to 600 MMK/chick, likely due to the recent increases in operational capacity of some broiler farms and consequent increased demand for chicks. As there will likely be another shortage of day-old-chicks,¹⁰ LBVD should consider allowing a certain amount of day-old-chicks to be imported again in the coming months. Doing so would avoid a repeat of what happened after the first wave of COVID-19 when a shortage of day-old-chicks resulted in some broiler farms shutting down and a spike in the broiler price.

The second wave of COVID-19 also has reduced demand for eggs. Egg prices decreased by 12 percent from 2,620 to 2,300 MMK/Viss between September and November (Figure 3).

⁹ Union of Myanmar Federation of Chambers and Commerce and Industry. Facebook. Accessed October 27, 2020. https://web.facebook.com/UMFCCI/posts/1964529153687915

¹⁰ Hein, Z. 2020. "There are applications to import chickens from abroad." *Myanmar Times*, November 20. https://myanmar.mmtimes.com/news/147023.html

Cash flow worsened markedly for both broiler and layer farms since the onset of the second wave of COVID-19. The share of broiler farms reporting that they could not maintain operation with their current cash flow for longer than three months increased from 9 to 21 percent between September and November, with 1 percent of broiler farms reporting that they would have cash flow problems within a month. In the August survey round, all layer farms reported that they would not have cash flow problems within 3 months. However, 17 percent reported in November that they could not maintain operation with their current cash flow for longer than three months (Figure 4).





Source: 2020 Yangon peri-urban poultry farmer survey – first to sixth rounds.

However, integrated broiler-fish farms fared better in cash flow than non-integrated broiler farms. In each month between June and November, a higher share of non-integrated broiler farms reported facing a heightened risk of cash flow problem (i.e. cash flow problem within three months) than did integrated broiler-fish farms.

Likewise, the share of non-integrated layer farms that would have cash flow problems within 3 months was also higher than integrated layer-fish farms. This is probably because integrated farms could rely on income from fish sales if the experienced urgent cash constraints. Interestingly, the share of integrated layer-fish farms that reported that they could not maintain operation with their current cash flow for longer than 5 months was higher than for non-integrated layer farms. As discussed earlier, the operational status of layer farms was significantly affected be whether fish production was integrated into farm operations. Non-integrated layer farms were considerably more likely to shut down than integrated layer-fish farms. Those closed non-integrated layer farms probably had worse cash flow. Therefore, overall expectations on business operations under the current cash flow situation of non-integrated layer farms would likely be much worse in aggregate if we also take already closed farms into account.

To illustrate the business operations of poultry farms in 2020 compared to 2019, we derived the Purchasing Managers' Indices (PMI) for operational capacity, operating cost, and revenue.¹¹

- The PMI operational capacity indices in November for broiler and layer farms are both lower than in August (Figure 5). This suggests that the operational capacity of both broiler and layer farms have been reduced since the onset of the second wave of COVID-19. As discussed earlier, poultry farms considerably decreased their operational capacity in September and then increased in October and November. Therefore, the PMI operational capacity indices were likely lower in September and October than in November. The patterns of PMI operational capacity indices after the two waves of COVID-19 are similar.
- The PMI revenue index decreased by more than 70 percent for both broiler and layer farms between August and November (Figure 5). This is mainly caused by decreases in demand and, hence, in prices since the onset of the second wave of COVID-19. This is consistent with the worsened cash flow situation discussed above.
- The PMI cost index remained the same for broiler farms and increased slightly for layer farms between August and November. This indicates that costs of various inputs were not affected significantly by the second wave of COVID-19.



Figure 5: Purchasing Managers' Indices (PMI) of poultry farms in 2020 compared with 2019

Source: 2020 Yangon peri-urban poultry farmer survey – first to sixth rounds.

Logistical disruptions once again became a major challenge to accessing inputs. As the Myanmar government again imposed stringent lockdown measures due to the onset of the second wave of COVID-19, poultry farmers in peri-urban Yangon faced renewed logistic challenges, such as slow services and high costs. Although the government has implemented measures to facilitate transportation services for agricultural products, 19 percent of broiler farms reported logistic disruptions in November, compared with none in August (Figure 6).

LVBD imposed an import ban on day-old-chicks between October and December in response to a decline in demand due to the second wave of COVID-19. This swift response protected domestic breeder farms and broiler farms. However, without any imports there may be another shortage of day-old-chicks in the coming months. The operational capacity of broiler farms is likely to recover in December and demand for day-old-chicks will increases in consequence. Therefore, LVBD should continue to regularly monitor markets for poultry and day-old chicks. If and when conditions warrant, government should lift the import ban on day-old-chicks.

¹ The Purchasing Managers' Index (PMI) is an index of the prevailing direction of economic trends in the manufacturing and service sectors. It consists of a diffusion index that summarizes whether market conditions, as viewed by purchasing managers, are expanding, staying the same, or contracting. An index reading of 50 means that the variable is unchanged. An index above 50 signals growth or expansion, while below 50 indicates decline or contraction.

Figure 6: Problems related to accessing inputs for poultry farms, percent of farms surveyed



Source: 2020 Yangon peri-urban poultry farmer survey - first to sixth rounds.

While most broiler farms and all layer farms reported no problems with selling products in August, about half of layer farms and two-thirds of broiler farms reported challenges with selling products in November. Decline in demand or low market price was the most cited problem. Between August and November, the share of farms reporting this problem increased from 16 to 59 percent for broiler farms and from zero to 39 percent for layer farms. Due to low prices, 25 percent of broiler farms reported that they had to retain products longer (Figure 7). Additionally, for the open-ended question, "What is the most important challenge facing your business?", more than 60 percent of poultry farms reported low demand and prices. Logistic disruptions also affected product sales for 9 percent of broiler farms and 2 percent of layer farms.



Figure 7: Problems related to selling products for poultry farms, percent of farms surveyed

Source: 2020 Yangon peri-urban poultry farmer survey - first to sixth rounds.

The total number of workers employed by the broiler farms surveyed further decreased since the onset of the second wave of COVID-19, with the total number in November 2020 being less than half the number employed in 2019 (Figure 8). The total number of workers hired by broiler farms, both integrated with fish and non-integrated, has gradually decreased since the first wave of COVID-19. During the pandemic, it seems that broiler farmers were likely to be more cautious about rehiring workers, which is likely due to the volatility of the broiler market in this period.





Source: 2019 baseline and 2020 Yangon peri-urban poultry farmer survey - first to sixth rounds.

For layer farms, the total number of workers employed also decreased since the onset of the second wave of COVID-19. During the pandemic, however, integrated layer farms maintained more workers (80 percent of its 2019 average) than non-integrated layer farms (53 percent of its 2019 average). This again demonstrates that integrated layer farms are more resilient to economic shocks than non-integrated layer farms.

Only 8 percent of poultry farms have applied for a loan since the outbreak of COVID-19. Among poultry farmers who never tried to apply a loan, more than half of them reported needing loans. The two most cited reasons for why they did not apply are "lending source is not present or unaware of any lending source" (62 percent of poultry farmers who needed a loan but never applied) and "fear high interest rates" (16 percent of those poultry farmers).

Policy recommendations

Based on the analysis of the sixth survey round of poultry farms in the Yangon peri-urban area, most of the policy recommendations in our first five policy notes still stand: prolong or expand income support to vulnerable households; encourage participation in government credit guarantee schemes; provide temporary income support to poultry farms; allow tax exemptions or deferrals; and lift restrictions on transportation of livestock and livestock products. A few recommendations are further stressed here:

 Though the Myanmar government already has implemented measures to facilitate transportation service for agricultural products, poultry farmers continued to report various kinds of logistical disruptions in the November survey round. Therefore, it is important to maintain or even strengthen these transport facilitation measures. For example, the government should extend the period under which trucks are allowed to transport agricultural products on the Yangon-Mandalay Expressway. The "green lane" for transporting agricultural products has been adopted in different countries during the pandemic. Certificates and banners can be distributed to trucks that transport agricultural products to speed up the "green lane". Currently, truck drivers for agricultural products in Myanmar must wait for a COVID-19 test at certain checkpoints. Fast tracks can be provided to these truck drivers to transport agricultural products more quickly.

- A new round of stay-at-home orders further reduced household incomes. Demand for broilers and eggs consequently suffered a double hit across the two rounds of COVID-19 infections. Thus, the government and its partners should aim to prolong or expand the income support program to vulnerable households, which could bolster egg and broiler consumption, contribute to food and nutrition security, and aid poultry farms.
- Few poultry farms in peri-urban Yangon received loan assistance. Though more than half of surveyed poultry farms reported needing loans, 62 percent of these farms reported being unaware of available loans. Information about credit/loan programs through the COVID-19 Economic Relief Plan should be better disseminated to poultry farmers so that more qualified farms can apply for loans to maintain the supply of poultry products and re-hire workers.
- LBVD resumed the import ban on day-old-chicks on 1 October, which is aligned with our recommendation in the policy note reporting on the results of the August survey round. However, another supply shortage of day-old-chicks may emerge in coming months based on increases in operational capacity in November leading to increased demand for day-old-chicks and, hence, increases in prices. LVBD should continue to frequently monitor the poultry market to guide any decisions on whether to lift the import ban on day-old-chicks.
- The Yangon Broiler Farmers Association is organizing mobile poultry selling across different townships in Yangon. This is helpful for both consumers and poultry farmers. To prevent disease transmission and protect these economic activities, the Yangon government can provide further support to this initiative by providing personal protective equipment, sanitizers, and water stations for poultry traders selling at designated locations and by having the police ensure that customers respect health protocols.

Analysis of data collected through the six survey rounds of poultry farmers around Yangon highlights several key indicators to monitor in future survey rounds. These include:

- Additional farm closures due to COVID-19 related shocks and whether temporarily closed farms reopen as demand for poultry products recovers;
- Changes in the number of chickens raised and restocked;
- Operational capacity, revenue, and costs compared to 2019 using the PMI indices;
- Changes in the number of regular workers hired;
- Problems related to selling products and accessing inputs, especially day-old-chicks; and
- Whether farms have attempted to apply for assistance and any problems they encountered in the process.

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