International Grains Council

IDACA
JA Group

Report of the IGC-IDACA Survey on Grains Market Information in Asia, Oceania and Africa

< Draft to be used at the Workshop On 7 February 2024 >

This is a reference material exclusively for the use at the workshop on maize, wheat and other commodities under the IGC/IDACA Survey to Collect Market Information in Asia, Oceania and Africa on 7 February 2024 in London, UK. Disclosure, quote or copy of any information in any part of this report is strictly prohibited as it is still in the process of finalization.

It is a summary of the answers to the Questionnaire collected from over 70 stakeholders in the regions, which will be subject for further clarifications and elaborations at the workshop in London and thereafter. Furthermore, it does not represent any views of the IGC or the IDACA officially.

7 February 2024

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Introduction

The International Grains Council (IGC) and the Institute for the Development of Agricultural Cooperation in Asia (IDACA) signed the MOU on Joint Actions in 2022 and both parties have been working together since then. In the course of collaboration, both parties agreed to launch the survey project to find out how accessible food market information was to producers, cooperatives, traders, food processors and consumers, especially those in remote areas, who have been affected by the price-hikes and market disruptions since 2022.

The objective of this survey is to promote sustainable development of production, processing and trade of grains, oilseeds and pulses and to contribute to world food security, recognizing necessities of capacity building to strengthen farmers and other stakeholders' positions in the value chain and to activate them in vitalizing rural communities. The major objective of this survey is to identify the challenges and opportunities related to food security in grains, oilseeds and pulses.

This project is funded by the Government of Japan, 2023 G7 Presidency. The IGC and the IDACA worked towards enhancing market transparency and preparedness for food and nutrition crises, the importance of which was recognized in the G7 Hiroshima Action Statement for Resilient Global Food Security on May 20, 2023. Such measures will certainly be helpful for grass-roots persons and those in the private sectors.

With this background, this project started in May 2023 with the aim of identifying challenges and opportunities related to grains, oilseeds and pulses. The project was divided into 4 phases that included a) identifying the issues and producing the questionnaire with academicians and leaders of international organizations (ANNEX 1) in the 1st phase (May – August, 2023), b) collecting answers to the questionnaire from over 70 stakeholders in the 2nd phase (September – November, 2023), c) organizing workshops for in-depth discussions with those who answered the questions to conclude the survey in the 3rd phase (December, 2023 – February, 2024).

During the 3rd phase, both parties jointly organized workshops in Bangkok and London in December 2023 and February 2024 respectively. The workshop especially focused on how to do to enhance market transparency. The following were some findings in the workshops;

- Market transparency is an important subject in terms of development. It is a tool to allow the weakest one in the supply chain to get the same level of information as others.

- Market information is useful for everybody concerned, farmers and all the other actors in the supply chain.
- How to understand better what can potentially happen on the market is an important challenge for stakeholders including producers and consumers. This is the most important point to understand the future of the market.
- Market information should always be neutral although it is always a challenge.

In the 4th phase, public forums and lectures in universities are planned to disseminate the outcomes of the survey to the people interested in this subject as many as possible.

CHAPTER I. Target of the Survey and the Number of Answers

1. Target of the survey

1) Outline of the questionnaire

The questionnaire regarding the key subjects for the target commodities was sent out electronically to the target groups, keeping in mind this survey's objective is to identify challenges and opportunities related with food security in the target commodities.

Key subjects

Main subjects:
- Market transparency
- Food security

Sub-items:
- Climate change
- COVID-19
- Price-hike

15 Target Commodities

- Wheat
- Sorghum
- Maize
- Oats
- Barley
- Rice
- Sunflower Seeds
- Rapeseed/canola
- Soybeans
- broad beans, kidney beans, urd/mung beans, chickpeas, lentils and dry peas

5 Target Groups

- Agricultural organizations
- Apex orgs of cooperatives
- Consumer cooperatives
- Food companies
- Think tanks & governments

- Followers of the Facebook Page "Former Participants of IDACA" (500 persons)

2) Targeted organizations/companies by sector

The questionnaire was sent out to over 200 organizations and companies in the regions on September 20, 2023. In addition, the selective part of the questions in the same questionnaire was posted on the SNS platform that the IDACA alumni join exclusively.

	Farmers organizations	Apex body of Cooperatives	Consumer cooperatives	Food companies	Think Tanks & governments
Total	**77**	**64**	**13**	**23**	**52**
East Asia	6	2	4	1	2
South Asia	16	16	3	3	3
Southeast Asia	18	24	1	0	5
Central Asia	1	1	0	0	0
Middle East	2	1	0	0	1
Oceania	4	3	0	1	13
Africa	30	17	5	19	28

2. Number of answers collected

49 answers (to both selective and descriptive questions) from organizations/companies in 5 target groups defined in 1. 1) above, and 22 answers (to only selective questions) from those who attended the IDACA's training course in the past, were collected by the end of October, 2023. The total number of answers was 71, far exceeding the initial goal of 50 answers. Answers by commodity and by economy were as follows.

1) **Rice, 37 answers**

(Asia)

Cambodia (3)	Laos	Sri Lanka (3)
India	Myanmar	Chinese Taipei
Indonesia	Nepal (3)	Thailand (3)
Japan	Philippines (9)	Vietnam (6)

(Oceania)

Fiji Islands	Papua New Guinea

(Africa)

Ghana (2)

2) **Maize, 24 answers**

(Asia)

Bhutan	Nepal	Philippines (2)

(Africa)

Burkina Faso	Ghana (3)	Nigeria (2)
Eswatini	Kenya (3)	Tanzania
Ethiopia	Malawi (2)	Uganda (4)
Gabon	Mauritius	

3) **Wheat, 7 answers**

(Asia)

Geogia	Japan	Turkey
India	Pakistan	

(Africa)

Ethiopia	Tunisia

4) **Barley, 1 answer**

(Asia) Kyrgyzstan

5) **Rapeseed/Canola, 1 answer**

(Asia) Turkey

6) **Other (not product-specific), 1 answer**

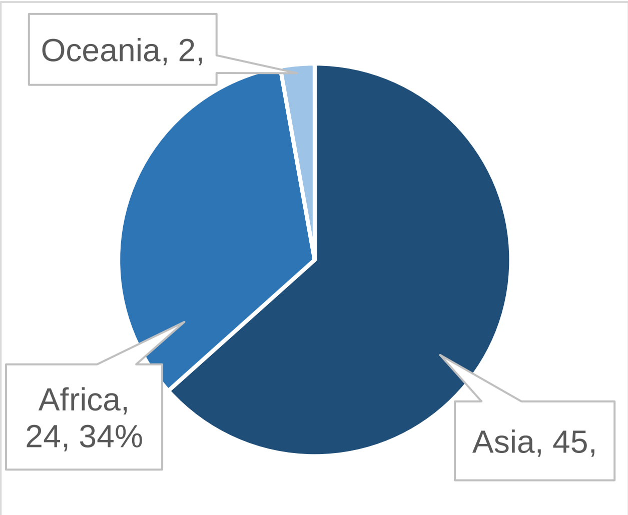
(Asia) China

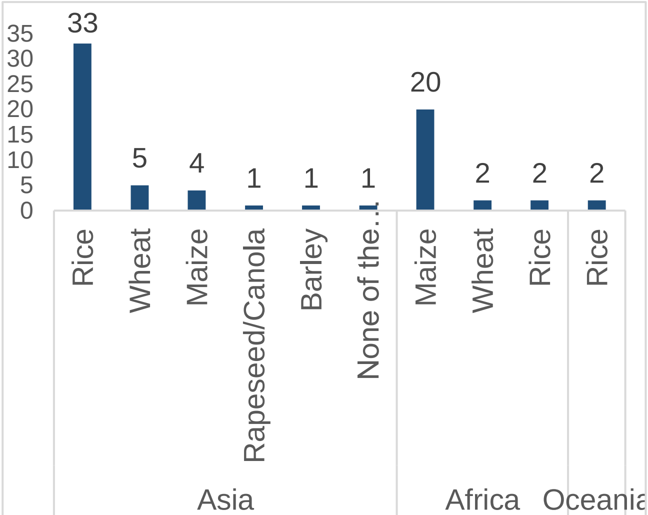
CHAPTER II. Survey Results

1. Overview of all the responses

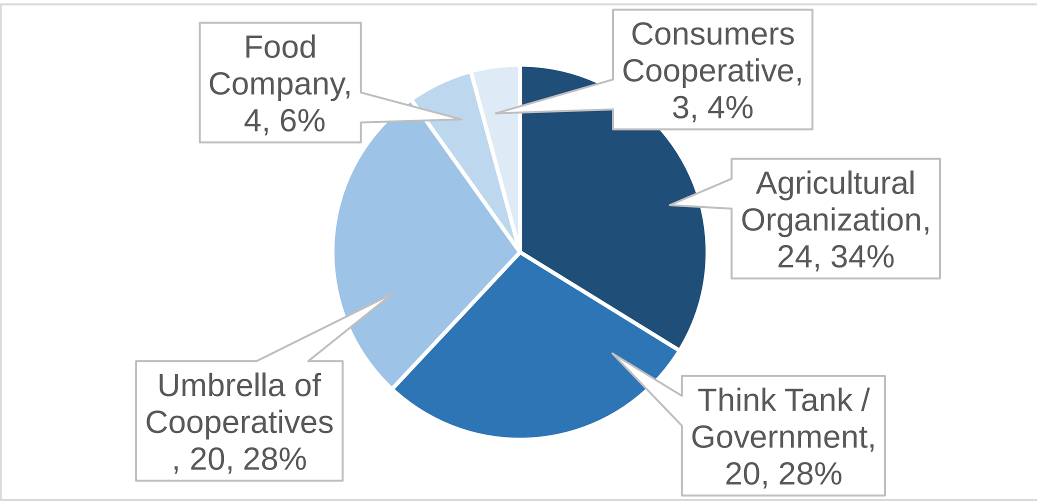
Among the total number of 71 responses, 45 or 63% were from Asia, which was followed by those from Africa (24 or 34%) and Oceania (2 or 3%).

By region, 33 out of the total 45 responses from Asia answered about rice that accounted for 73% of the total responses from Asia, and 20 out of total 24 responses from Africa answered about maize which share 83%. Both of the 2 respondents in Oceania answered about rice.



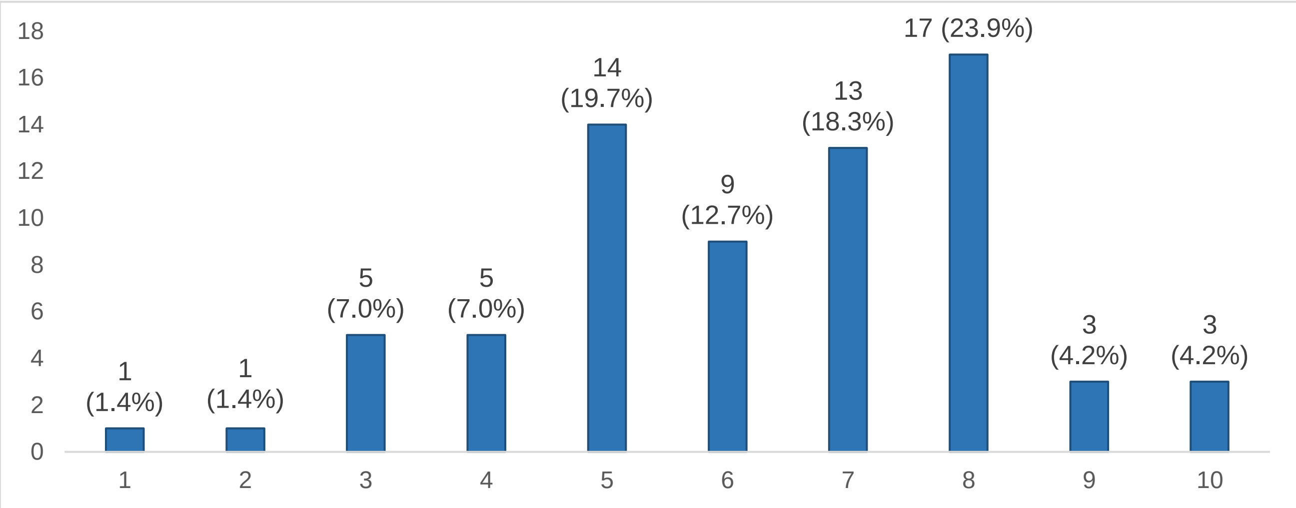


By organization, 24 respondents or 34% to the total were with agricultural organizations. They were followed by 20 think-tanks/governments (28%), 20 umbrella of cooperatives (28%), 4 food companies (6%), and 3 consumer cooperatives (4%).



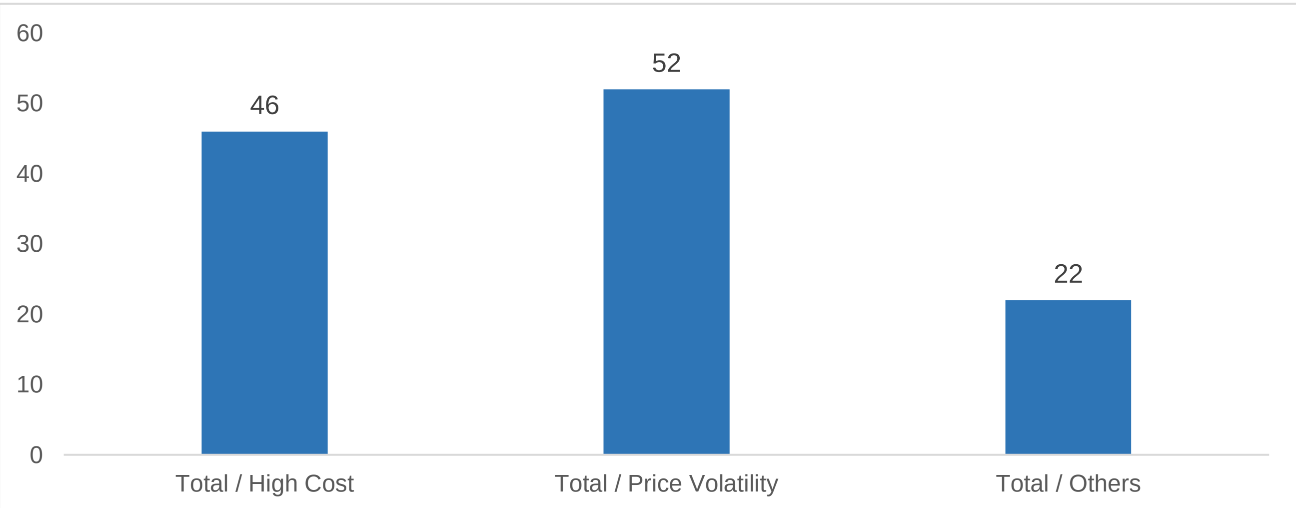
Q2-1: Market conditions in the last 10-20 years

The overall average was 6.5 and the respondents regarded the market conditions to be slightly volatile. The highest score was "8" (17 respondents or 24%) which indicated a volatile feeling. This was followed by "5" (14 or 20%).



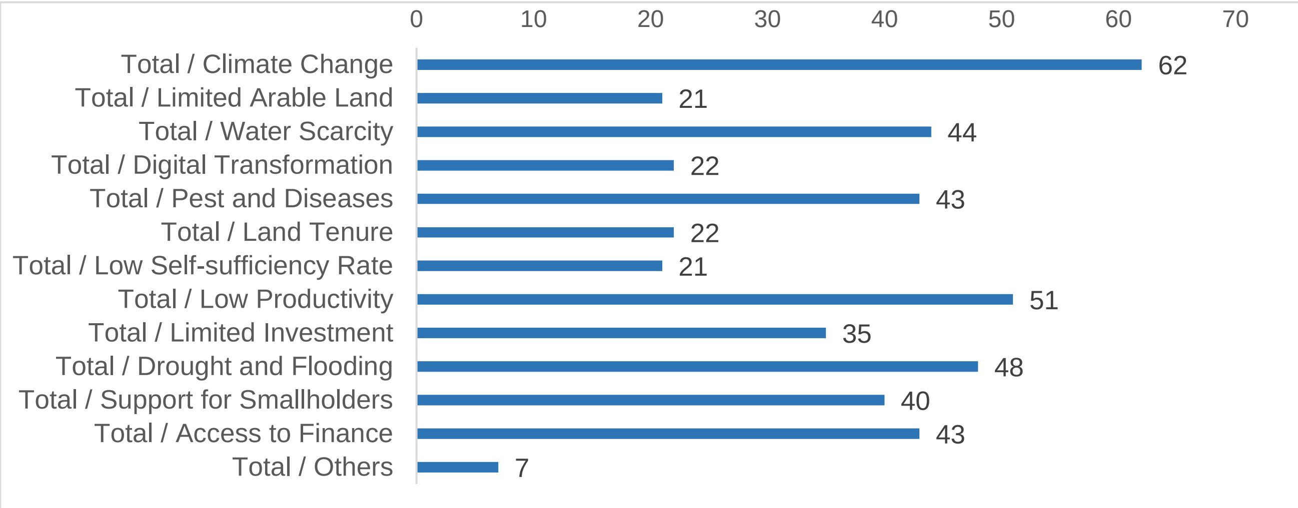
Q2-2a: Challenges in terms of inputs to address market conditions in Q2-1

"Price Volatility" was selected by 52 respondents or 73% of the total respondents, which was followed by "High Cost".



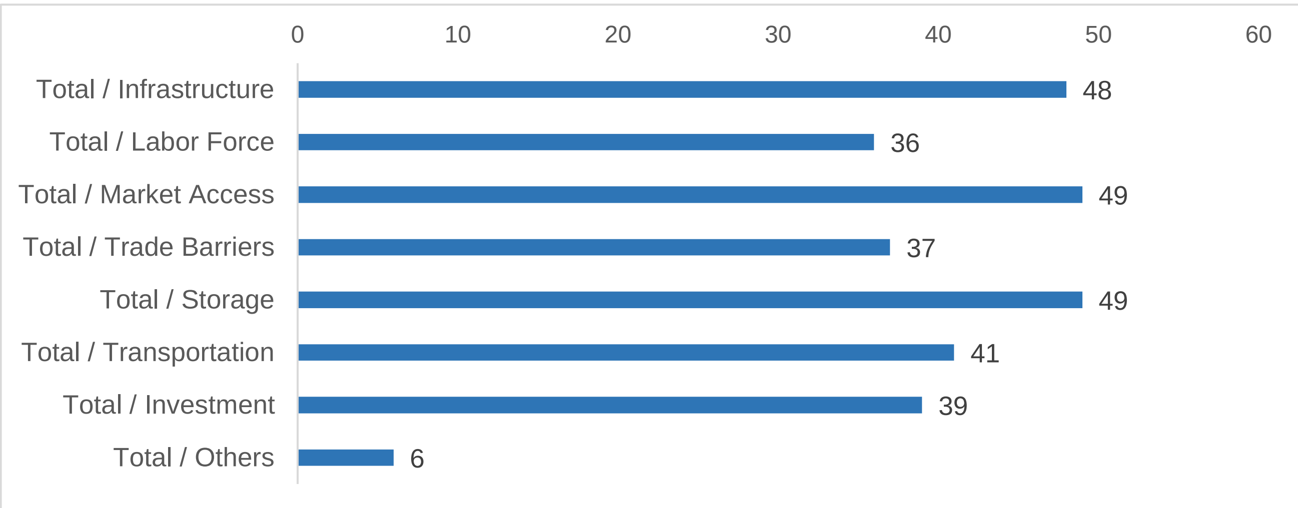
Q2-2b: Challenges in terms of production to address market conditions in Q2-1

In terms of production, “Climate Change” was selected by 62 respondents or 87% to the total as one of the challenges to address market conditions. Other climate change related items such as “Drought and Flooding” (48 or 68%) and “Water Scarcity” (44 or 62%) were selected by many respondents too. Among others, “Low Productivity” (51 or 72%), “Pest and Diseases” and “Access to Finance” (43 or 61% each) were the items many answerers reacted.



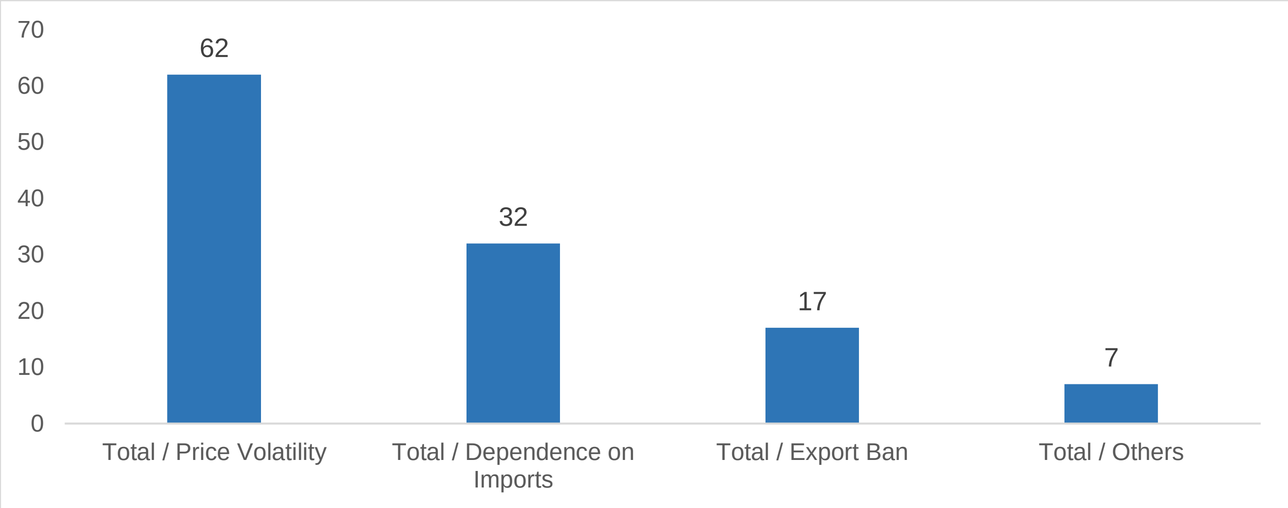
Q2-2c: Challenges in terms of processing to address market conditions in Q2-1

The aspect of logistics, including, “Market Access”, “Storage” (49 respondents or 69% each) and “Infrastructure” (48 or 68%) were the areas of greatest concern for processers.



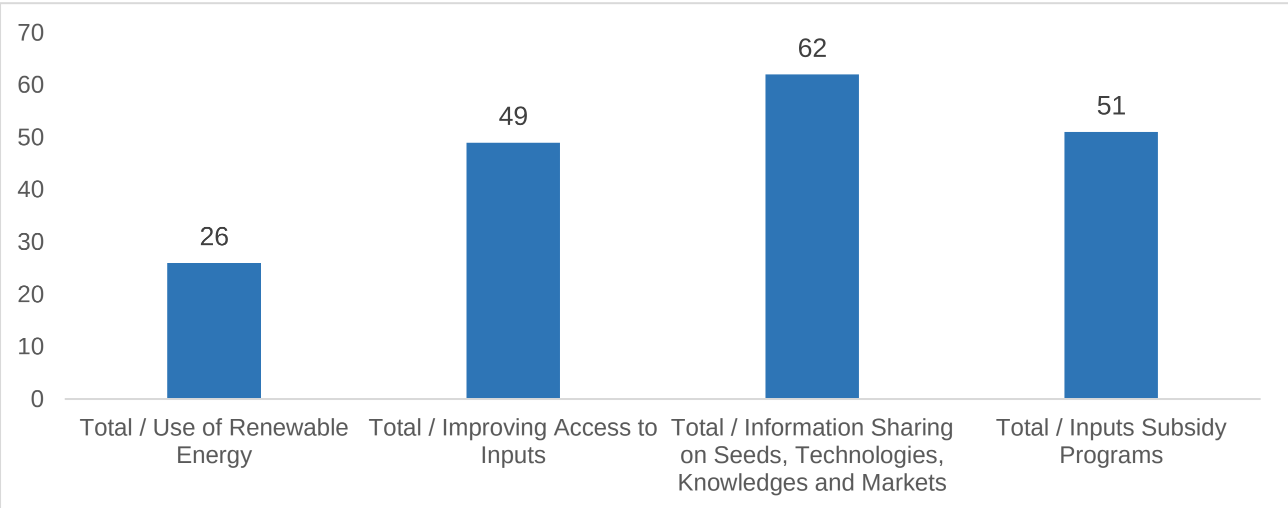
Q2-2d: Challenges in terms of consumption to address market conditions in Q2-1

62 respondents out of 71 respondents (87%) to the total chose "Price Volatility" as a challenge to address market conditions for consumers.



Q2-3a: Options in business regarding inputs to address the challenges in Q2-2

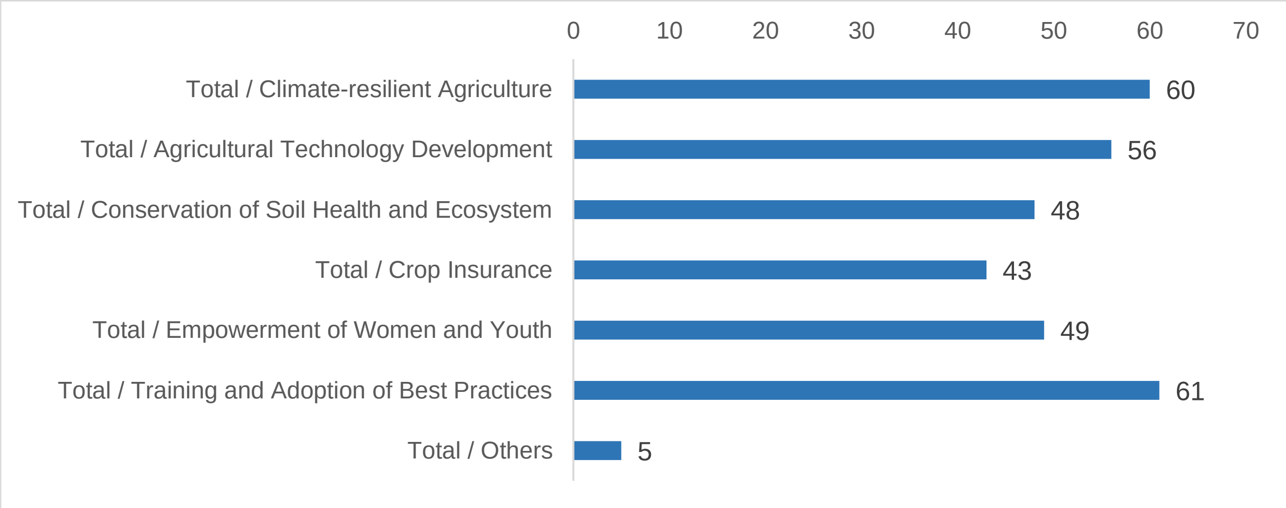
62 out of 71 respondents (87%) chose "Information Sharing on Seeds, Technologies, Knowledges and Markets", which was followed by "Inputs Subsidy Programs" (51 respondents or 72%)[1].



[1] Mr. Balu Iyer, Regional Director, International Cooperative Alliance (ICA) Asia and the Pacific commented at the workshop on rice in December, 2023, in Bangkok, Thailand, that farmers being affiliated with any collectives including cooperatives are in a much better position to purchase inputs to avoid negative effects for their production cost.

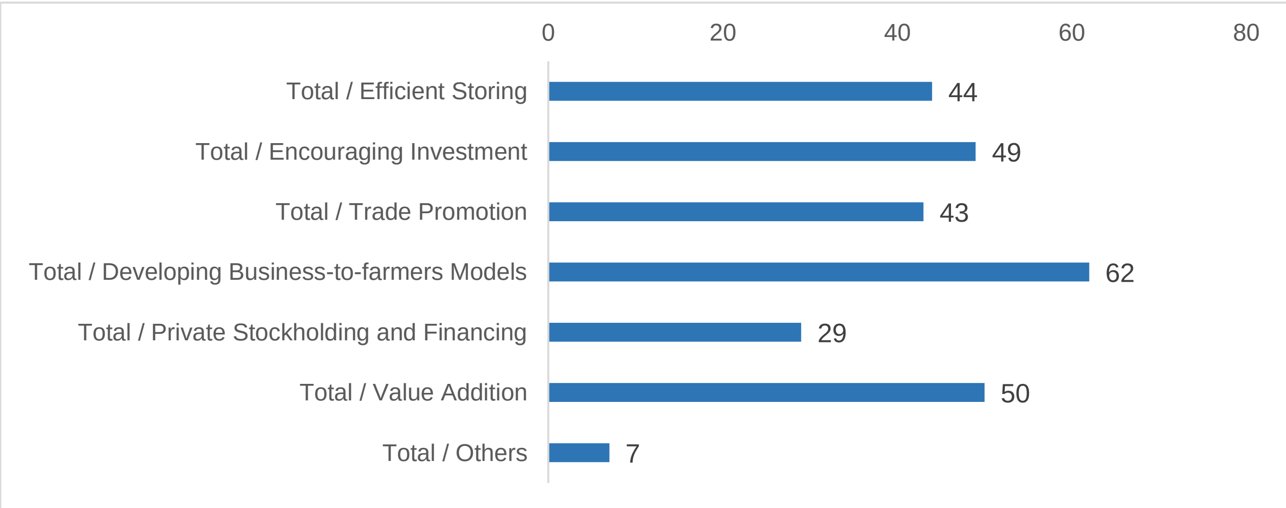
Q2-3b: Options in business regarding production to addressing the challenges in Q2-2

Respondents appeared to be highly interested in all of these terms.



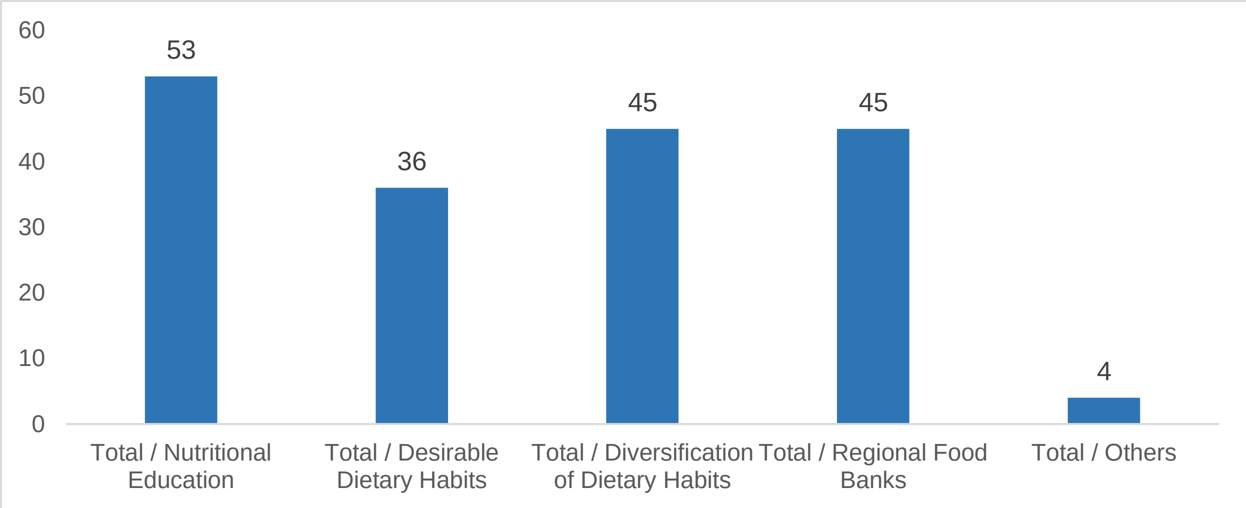
Q2-3c: Options in business regarding processing to address the challenges in Q2-2

The most common response was “Developing Business-to-farmers Models” (62 respondents or 87%). “Value Additions” (50 or 70%) and “Encouraging Investment” (49 or 69%) follow.



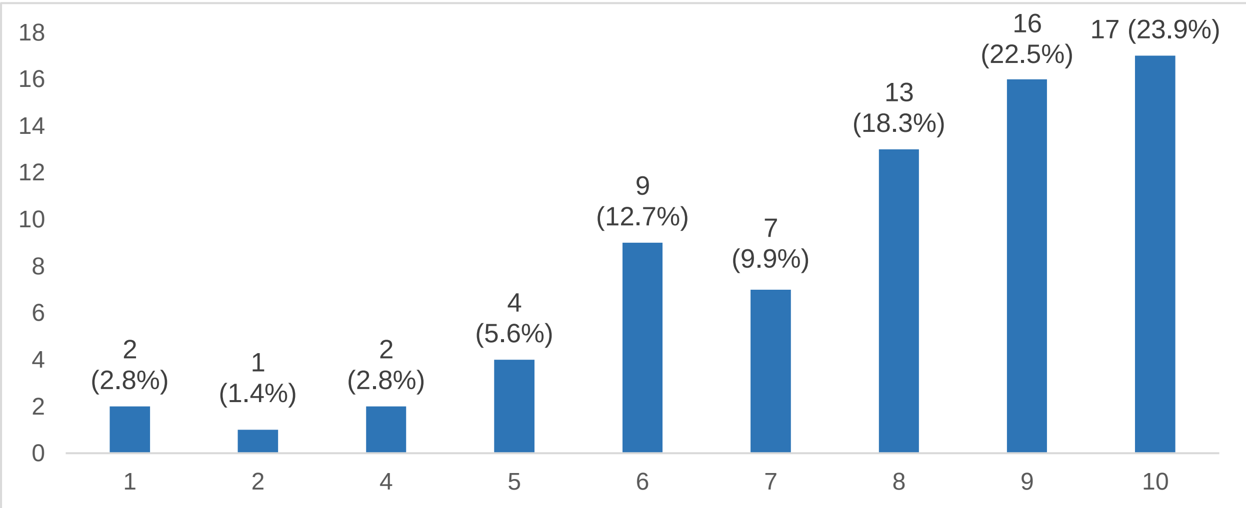
Q2-3d: Options in business regarding consumption to address the challenges in Q2-2

"Nutritional Education" was selected by 53 respondents or 75%, which was followed by "Diversification of Dietary Habits" and "Regional Food Banks" (45 or 63% each).



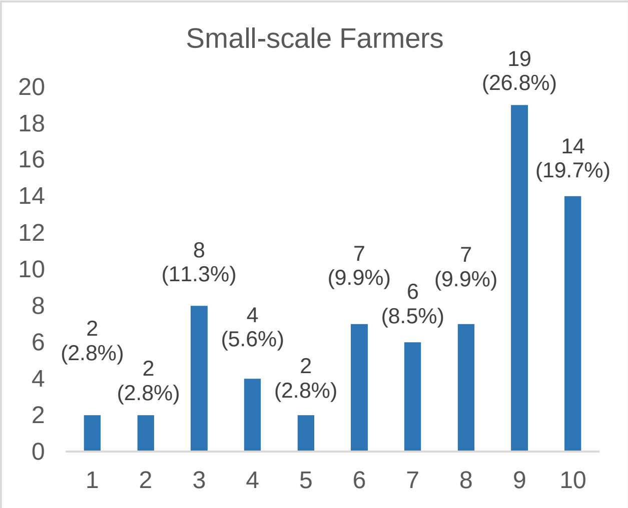
Q3-1: General effect of climate change

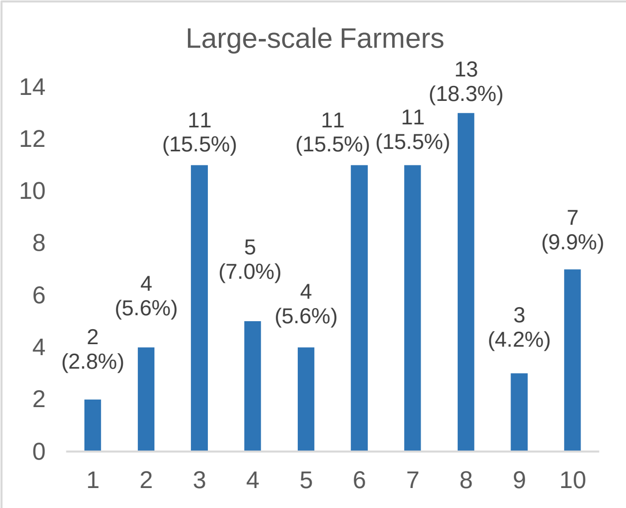
62 respondents or 87% to the total responded the score equal to or higher than "6". Out of whom, 46 or 65% answered between "8" and "10", who thought general effect of climate change to be serious.

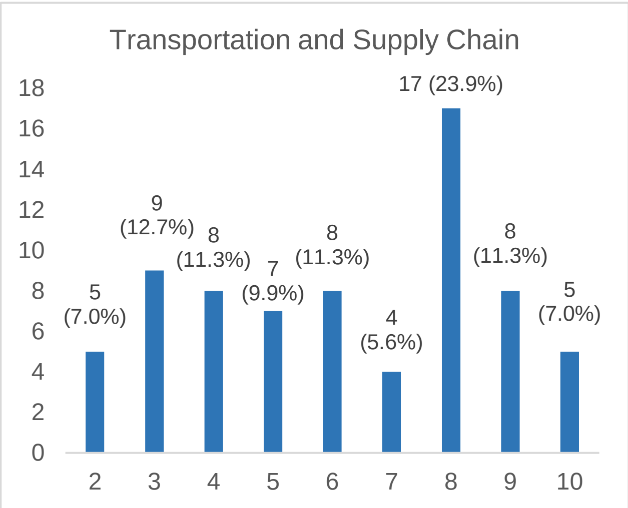


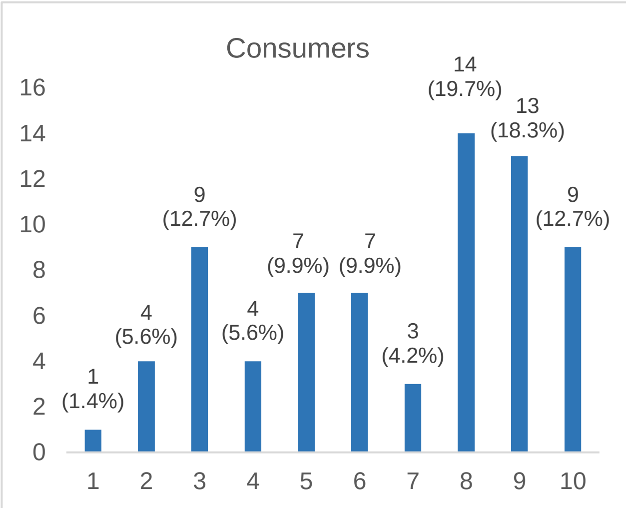
Q3-2: The extent climate change affects different players in the value chain

The average figure on "Small-scale Farmers" was 7.14, "Large-scale Farmers" 6.01, "Transportation and Supply Chain" 6.17 and "Consumers" 6.61. This result potentially shows that "Small-scale Farmers" and "Consumers" got slightly more negative effects than "Large-scale Farmers" and "Transportation and Supply Chain".



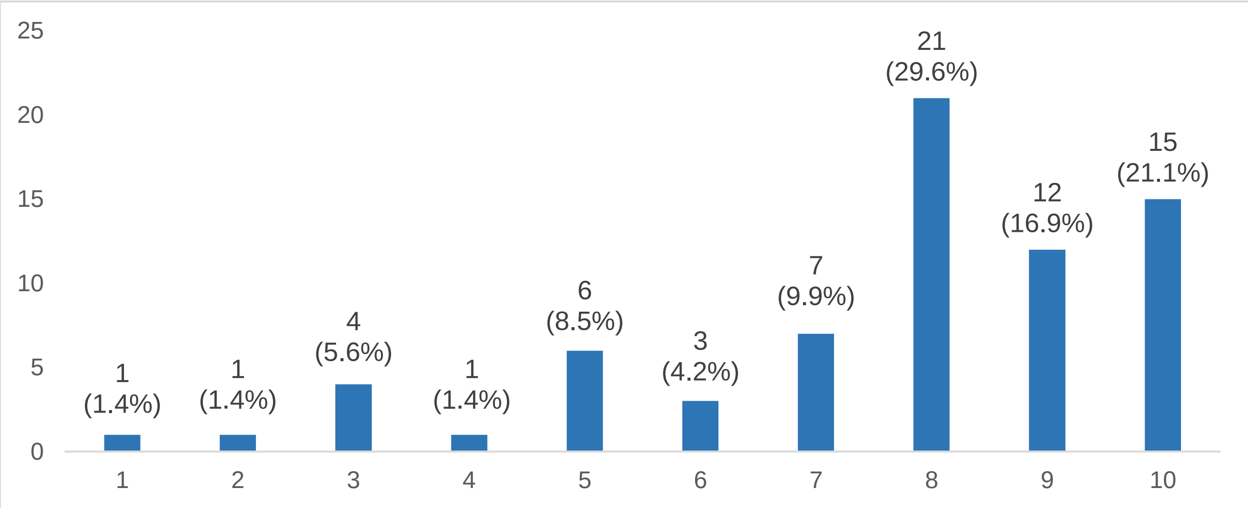






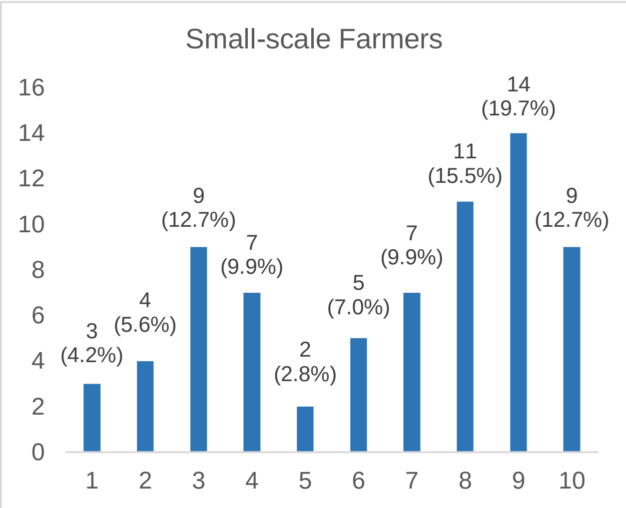
Q4-1: General effect of Covid-19

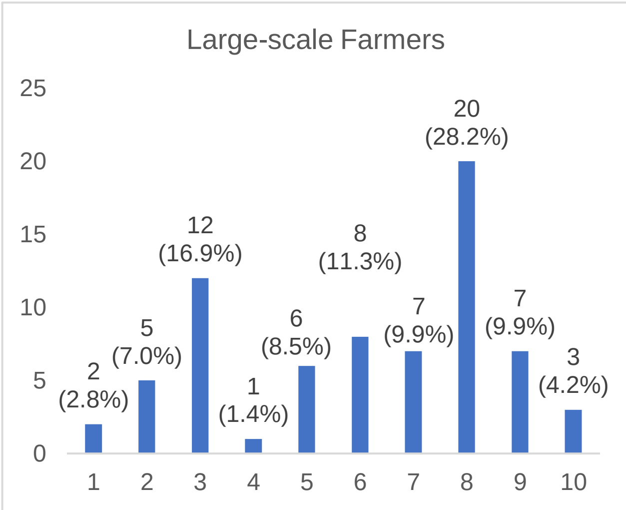
The average was 7.86 which showed the effect of Covid-19 was rather serious. The responses between "8" and "10" accounted for 48 or 68% which could be interpreted that overall impact of Covid-19 was considerable.

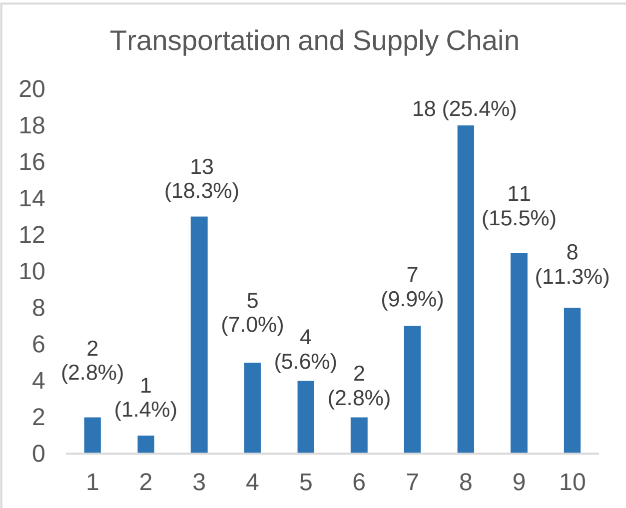


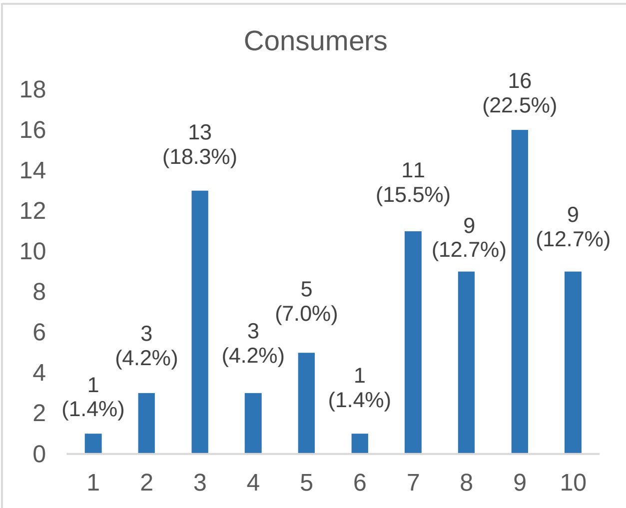
Q4-2: The extent Covid-19 affects different players in the value chain

The average figure on “Small-scale Farmers” was 6.46, “Large-scale Farmers” 6.08, “Transportation and Supply Chain” 6.58 and “Consumers” 6.65. This result may potentially show that the respondents thought the effect of Covid-19 on “Large-scale Farmers” was less than those on other three players in the value chain.



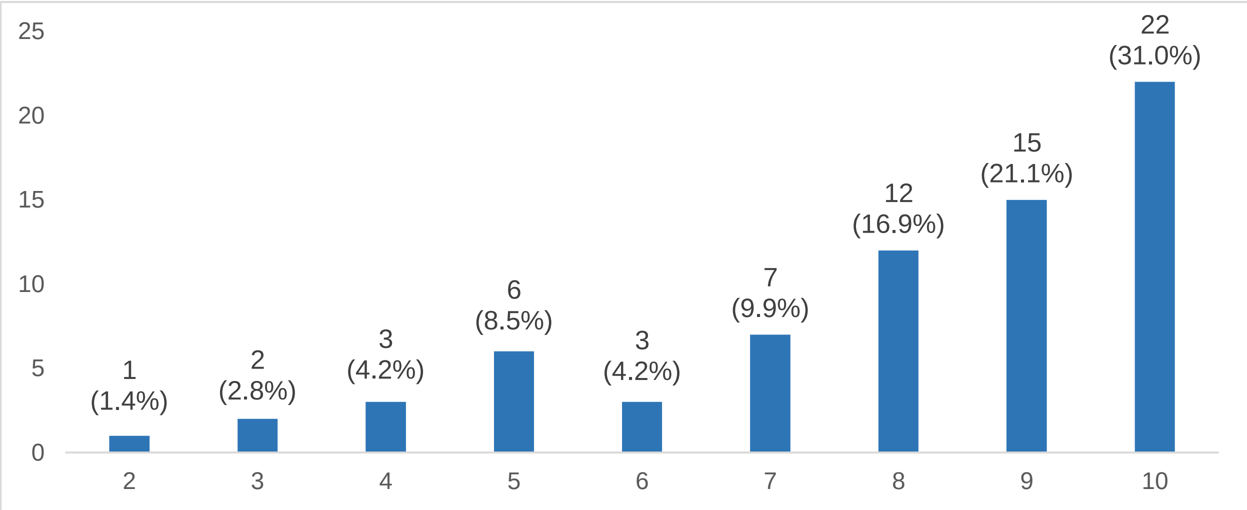






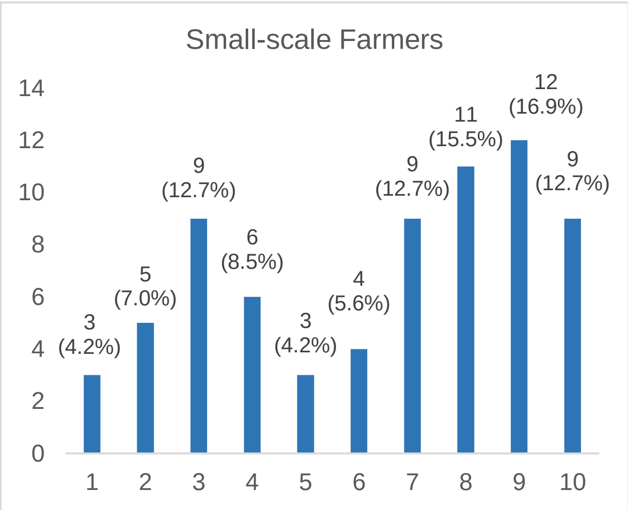
Q5-1: General effect of price-hike in 2022/23

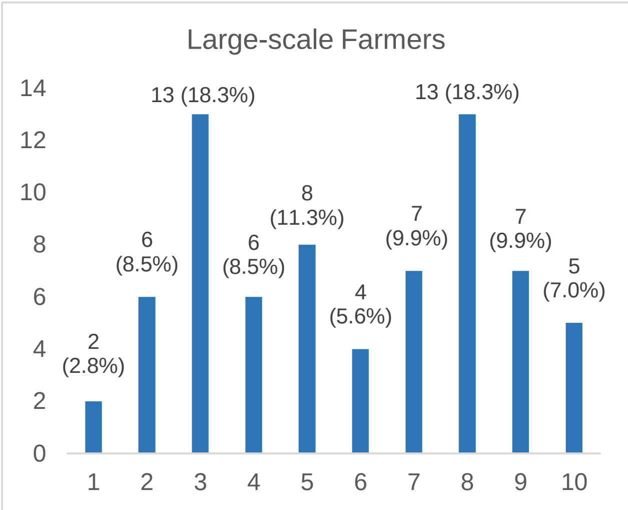
The average was 8.00 which shows the effects of price-hike in 2022/23 was considerable. The response of “10” (22 respondents or 31%) was the highest among others.

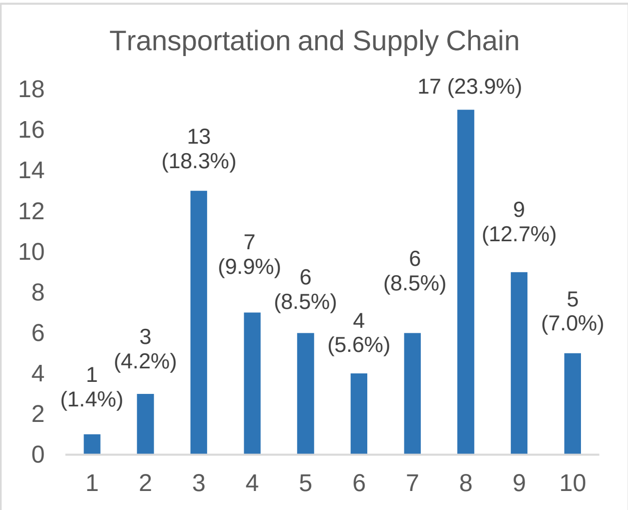


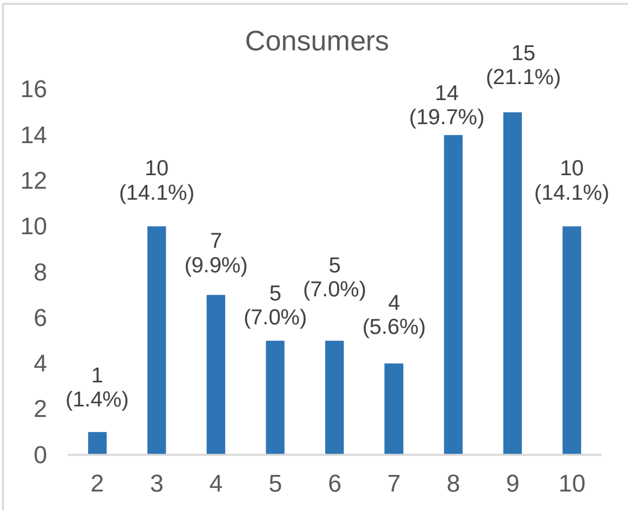
Q5-2: The extent price-hike in 2022/23 affects different players in the value chain

The average figure of the effects on “Small-scale Farmers” was 6.37, “Large-scale Farmers” 5.73, “Transportation and Supply Chain” 6.15 and “Consumers” 6.90. This result potentially shows that the respondents thought more serious effects were put in the order on “Consumers”, “Small-scale Farmers” and “Transportation and Supply Chain”. It should be noted there are two peaks in relation to every party, with peaks at “3” and “8”/”9”.



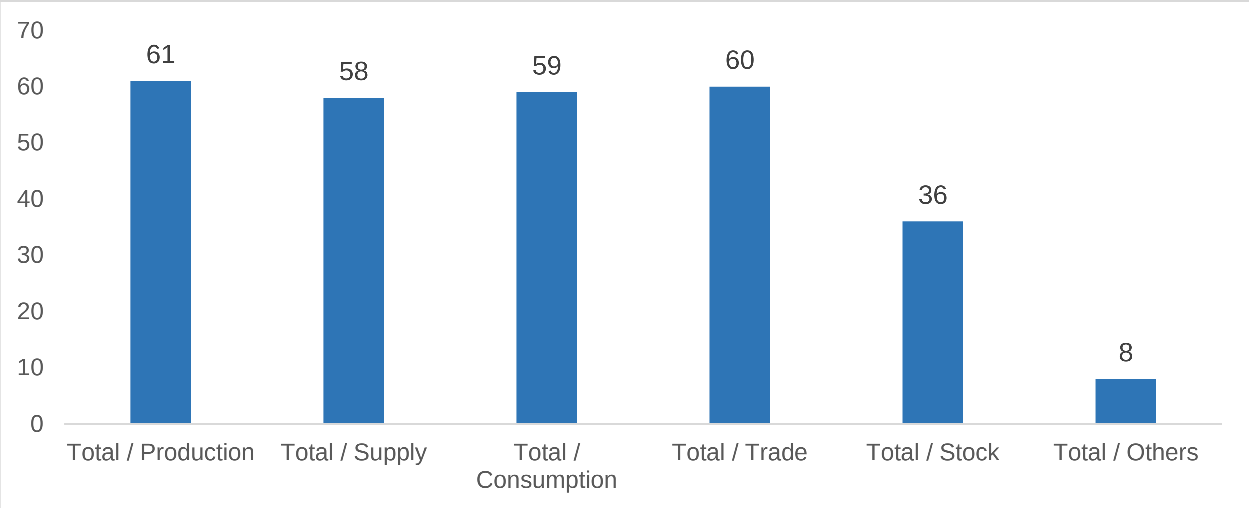






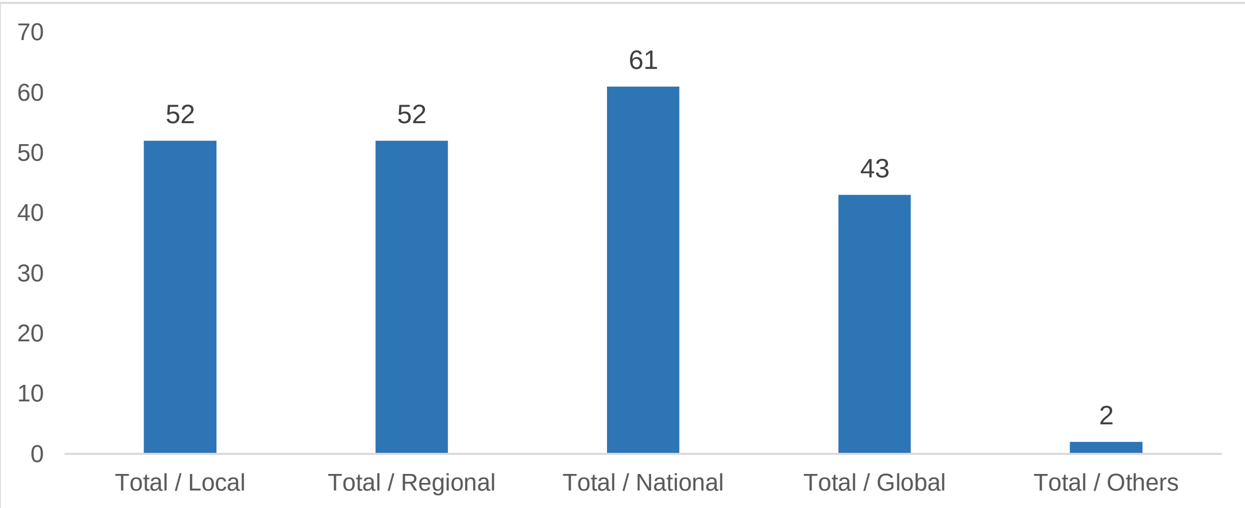
Q6-1a: Which type of market information stakeholders are dependent?

Most respondents replied that they were dependent on market information regarding "Production", "Supply", "Consumption" and "Trade", while they were comparatively less dependent on market information regarding "Stock".



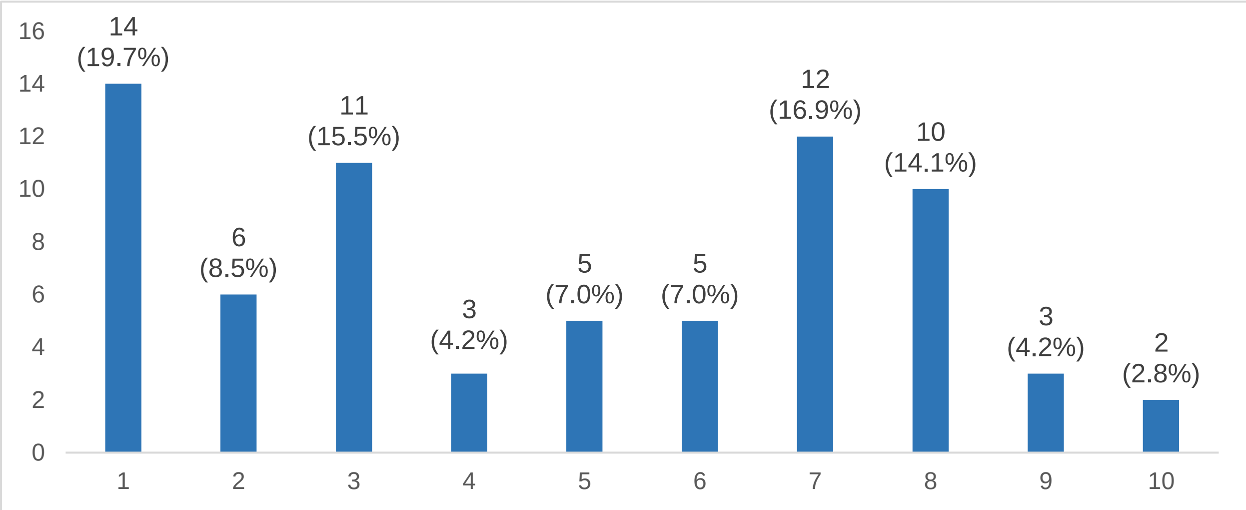
Q6-1b: Which level of market information stakeholders are dependent?

61 respondents or 86% to the total answered they were dependent on market information at the "National" level, while they were comparatively less dependent on market information at the "Global" level.



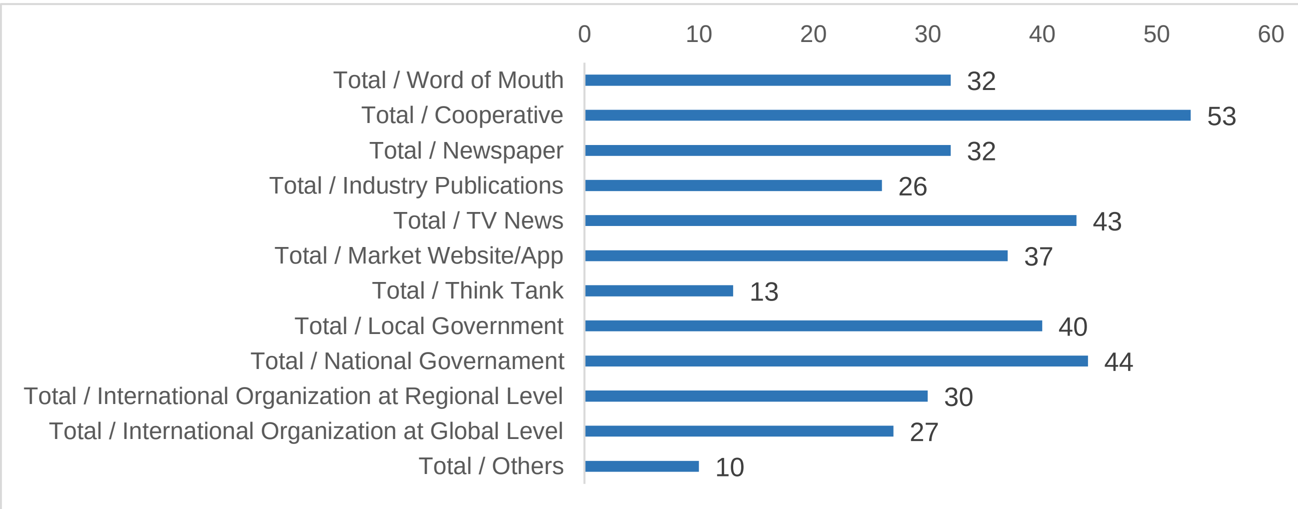
Q6-2: How much stakeholders rely on market information?

22 respondents or 31% to the total answered either “7” or “8” (close to being not dependent very much), while 14 or 20% answered “1” (being dependent very much).



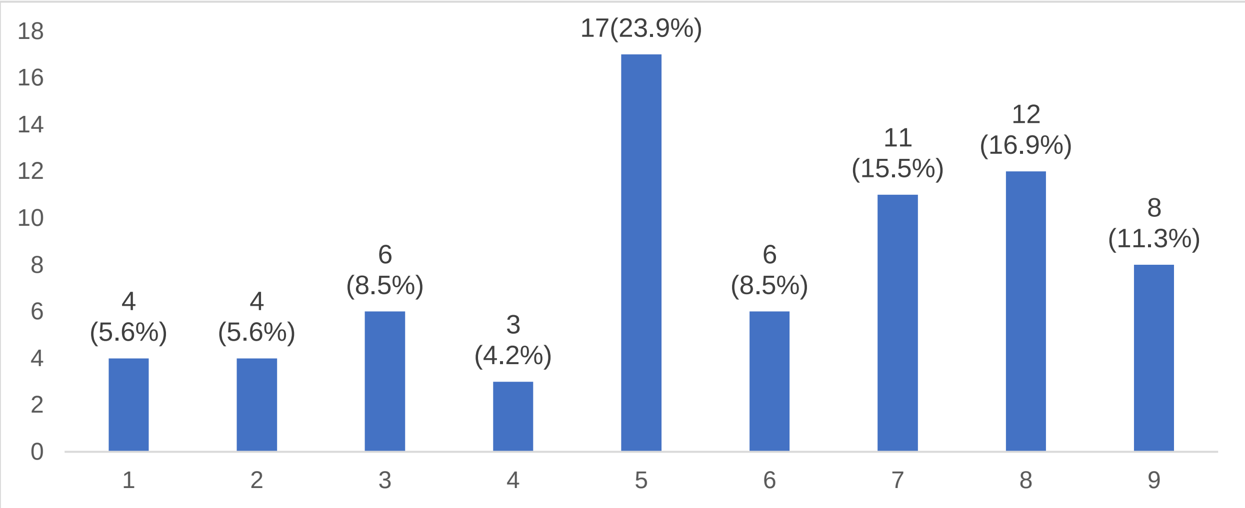
Q6-3: Which sources of market information stakeholders rely on?

53 respondents or 75% to the total indicated they relied on market information of “Cooperative”, and 44 or 62% of “National Government”. They also relied on information of “TV News” (43 or 61%) and “Local Government” (40 or 56%), while they did not rely on “Think Tank” very much (13 or 18%) as far as market information is concerned.



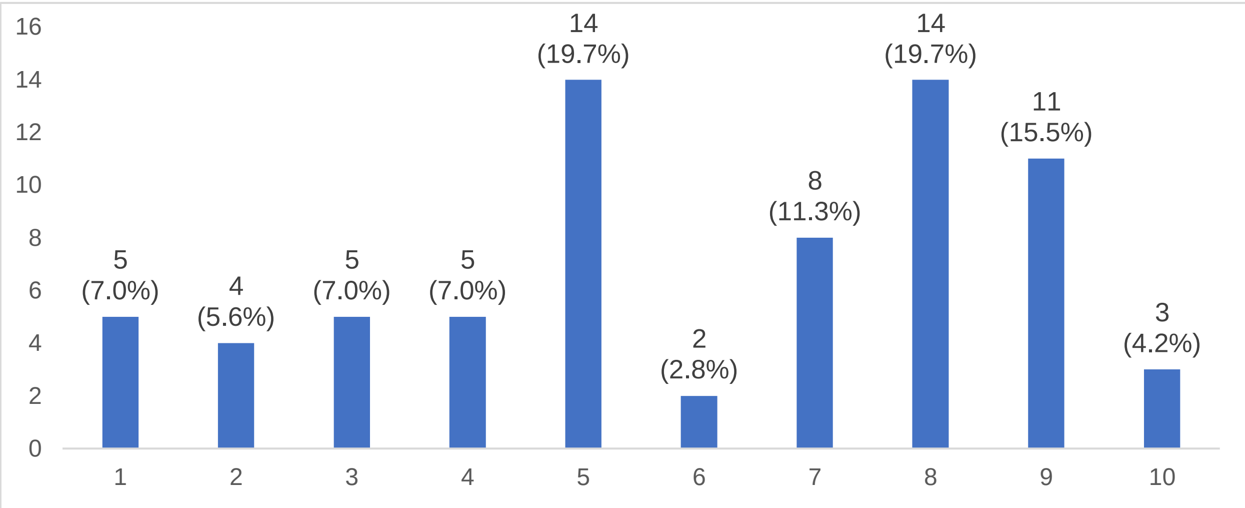
Q6-4a: How transparent the market is?

The average response to this question was 5.75 which was an intermediate reaction. The responses were sparse with the answer "5" (17 respondents or 24%) being the center of reaction.



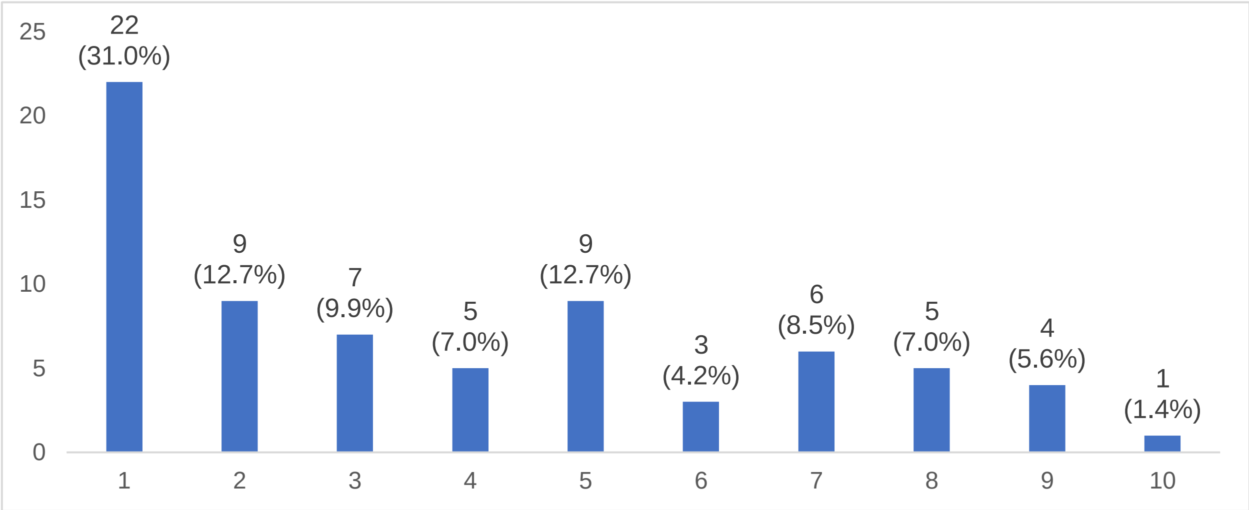
Q6-4b: Is market transparency sufficient enough to understand market conditions?

Respondents were divided into two poles, the answer "5" and "8" with 14 respondents or 20% each. The average figure was 6.01, which the respondents were slightly inclined to think market transparency was not sufficient.



Q6-5: How effective are public-private partnerships and networking in the value chain?

The average was 3.83 which the respondents thought public-private partnership and networking were somewhat useful. 22 respondents or 31% answered “1”.



2. Analysis of the selective questions

1) Summary of the answers to the selective questions

The table below is a list of the simple average of the answers by commodity. As are shown in the areas squared with blue, rice was regarded to be in the most volatile conditions in the market, and to be most seriously affected by Covid-19 and price-hike among the three commodities. Wheat was most seriously affected by climate change, and respondents saw wheat most negatively in terms of market information, transparency and public-private partnership. Respondents reacted maize comparatively positive among three commodities.

Questions	Rice	Maize	Wheat
	Average (1-10)	Average (1-10)	Average (1-10)
Q2-1: Market conditions in the last 10-20 years	6.46	6.17	6.00
Q3-1: General effect of Climate Change	7.89	7.50	8.00
Small-scale Farmers	6.92	6.83	8.71
Large-scale Farmers	5.81	5.96	7.14
Transportation and Supply Chain	6.43	5.50	6.29
Consumers	6.65	6.00	7.86
Q4-1: General effect of Covid-19	7.86	7.96	6.71
Small-scale Farmers	6.92	6.04	6.29
Large-scale Farmers	6.35	6.25	5.14
Transportation and Supply Chain	7.11	6.21	5.86
Consumers	7.05	6.13	6.86
Q5-1: General effect of Price-hike in 2022/23	8.30	7.83	7.29
Small-scale Farmers	6.65	5.88	6.29
Large-scale Farmers	6.03	5.25	5.43
Transportation and Supply Chain	6.54	5.54	5.57
Consumers	6.84	6.96	6.71
Q6-2: Rely on market information	4.97	3.71	6.00
Q6-4a: Market transparency	5.78	5.54	7.00
Q6-4b: Market transparency is sufficient enough to understand market condition	6.19	5.63	7.00
Q6-5: Effectiveness of public-private partnerships	3.97	2.79	5.29

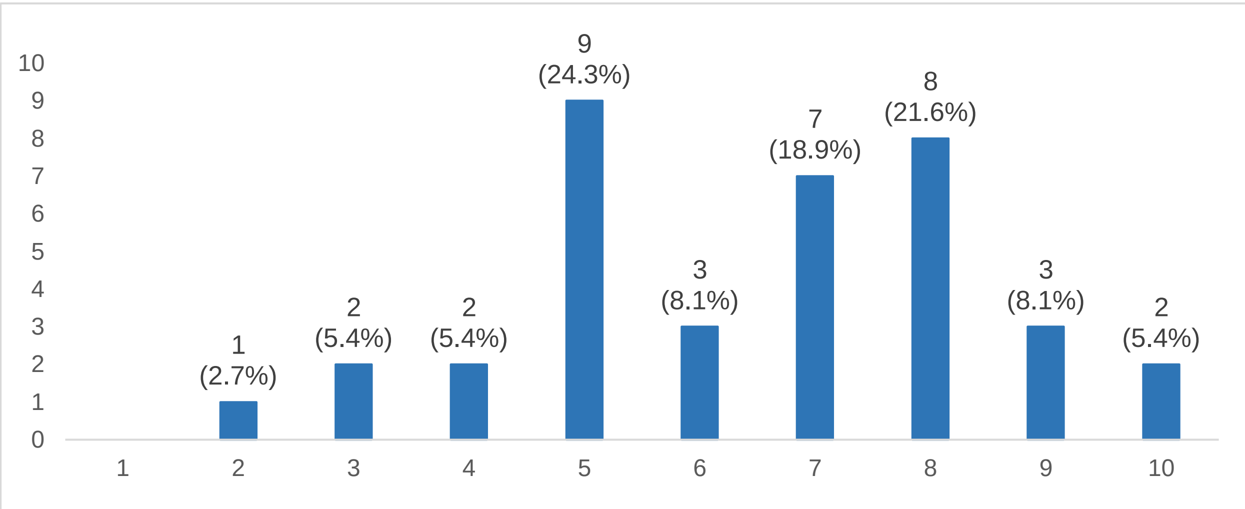
2) Analysis of the answers by commodity (Rice, Maize and Wheat)

i. Rice (37 answers)

Global rice markets have seen elevated levels of instability, with international prices surging to a 15-year high in the wake of India's export ban on non-basmati white rice. Such price movements, and associated market uncertainty, can cause challenges throughout the supply chain, particularly to market participants who may not have adequate access to market information, such as those in rural areas.

<u>Q2-1: Market conditions of rice in the last 10-20 years</u>

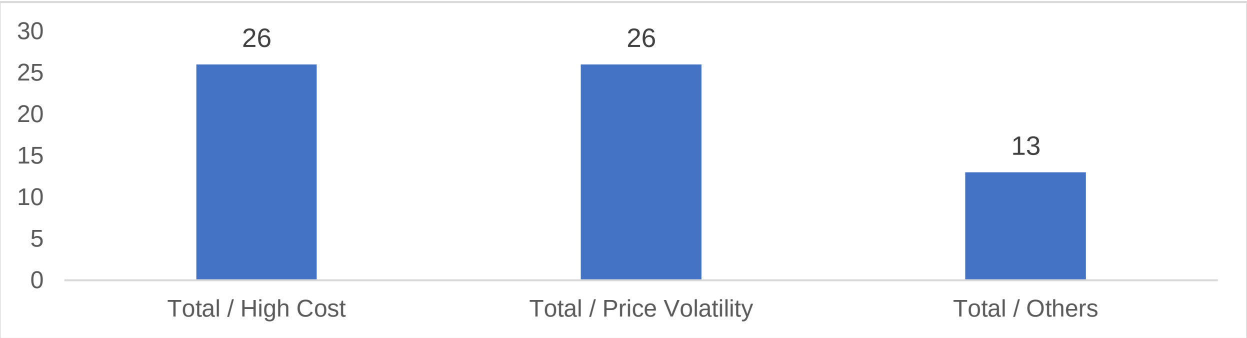
The average of the answers was 6.46, the highest figure among other two commodities on the same question. This figure could be interpreted that the market conditions of rice was comparatively volatile, while it should be noted that the number of respondents to the answer "5" accounted for 9 persons or 24%, the highest figure among options of the answer.



Q2-2a: Challenges in terms of inputs to rice to address market conditions in Q2-1

Both of the options, i.e., “High Cost” and “Price Volatility”, got 26 reactions from the total 37 respondents on rice. Respondents specified the following as “Others”.

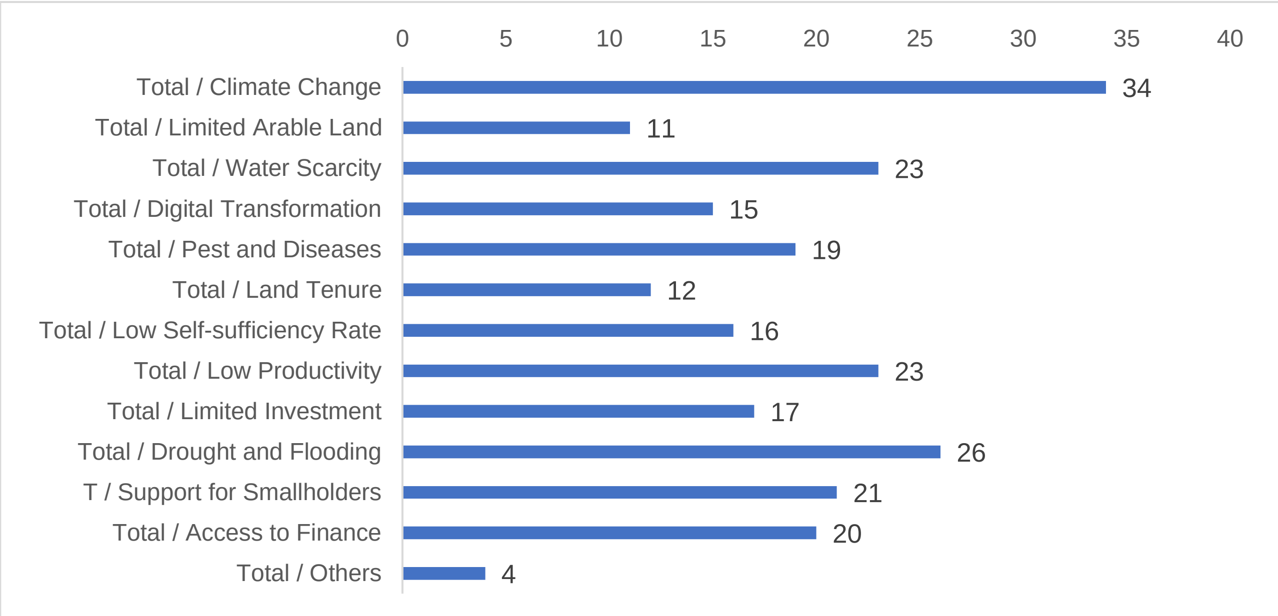
- Market is not driven by farmers or their organizations
- Geo-political impacts on imports and availabilities of fertilizers caused by tariffs and higher commodity prices
- Low quality of inputs, inadequate fertilizer and irrigation water
- Increasing demand with increasing population
- Very low farm gate price, high inputs prices, vulnerability to climate change



Q2-2b: Challenges in terms of production of rice to address market conditions in Q2-1

Among the 12 options, "Climate Change" was chosen by 34 respondents (92%), with other options relevant to climate change such as "Drought and Flooding" (26 or 70%), "Low Productivity" and "Water Scarcity" (23 or 62% each) were chosen as challenges related to production of rice. Respondents specified the following as "Others".

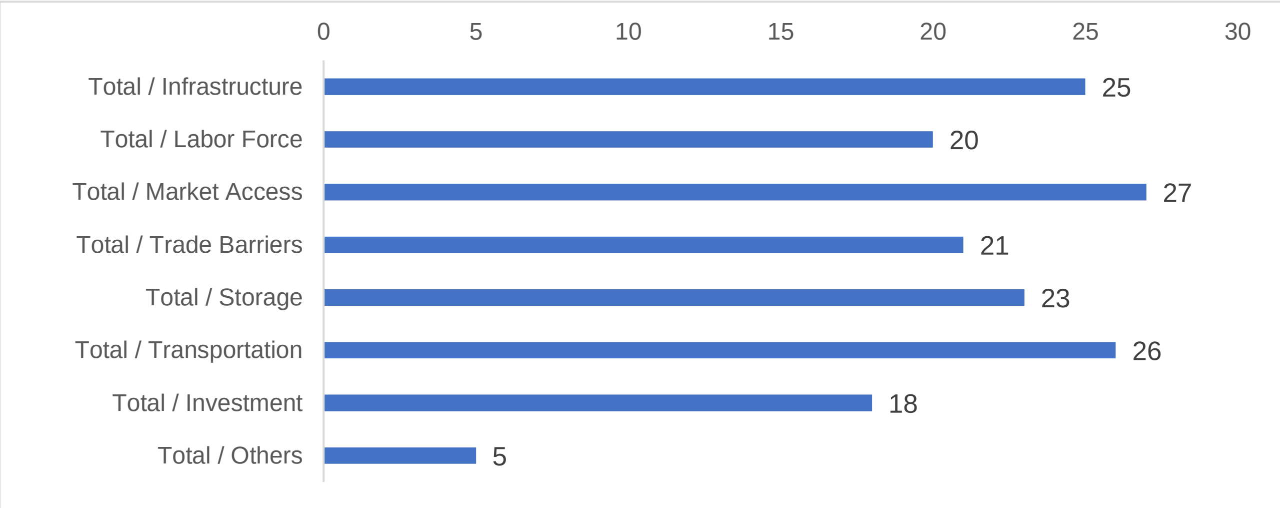
- Access to crop insurance, early warning systems and extension services
- Limited access to market, no minimum support price, large amount of profit for middlemen and lack of storage centers
- Limited local production despite availability of land



Q2-2c: Challenges in terms of processing of rice to address market conditions in Q2-1

"Market Access" (27 respondents or 73%), "Transportation" (26 or 70%) and "Infrastructure" (25 or 68%) were the top 3 answers among others, but generally speaking, there was no significant differences in the answers by the respondents among the 7 options. Respondents specified the following as "Others".

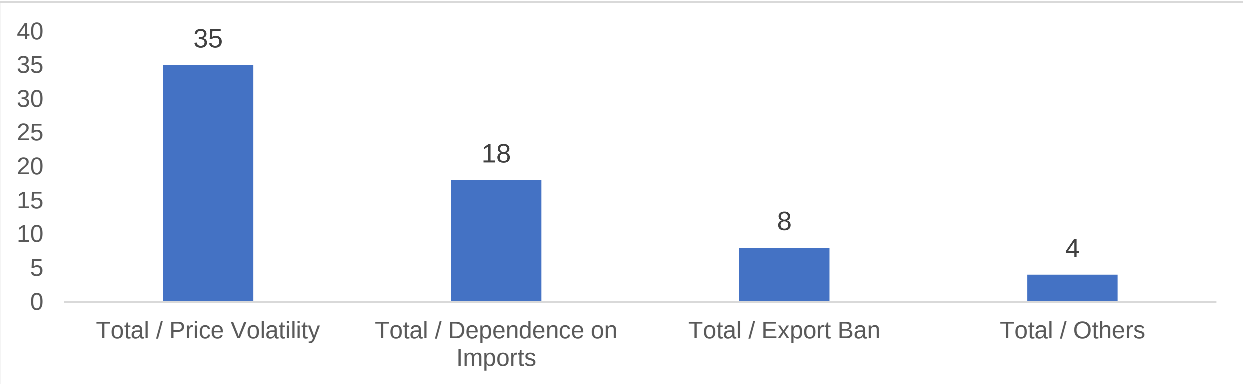
- IT application and digital transformation
- Lack of knowledges among domestic human resources to run modern processing plants that causes higher cost to employ foreign skilled worker, with additional blow of government taxation policy on new technologies
- Increased import costs
- No food processing standard



Q2-2d: Challenges in terms of consumption of rice to address market conditions in Q2-1

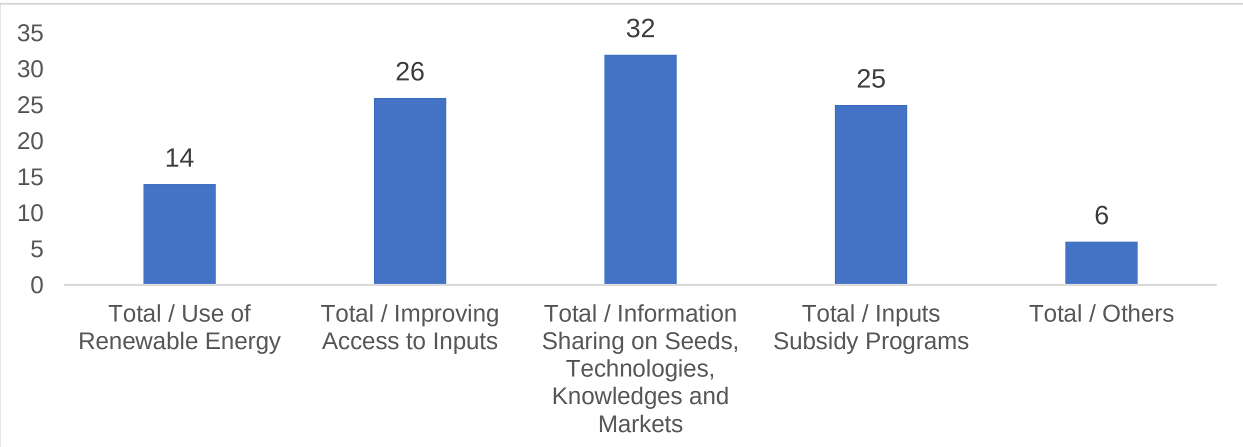
Out of the 37 respondents, 35 persons or 94.6% answered **"**Price Volatility" was the challenge, that was followed by "Dependence on Imports" (18 or 49%) and "Export Ban" (8 or 22%) which the respondents in importing countries pointed out. Respondents specified the following as "Others".

- Strong demand of high quality
- No quality control or food safety standard, inadequate monitoring mechanisms by the government
- High cost of production and transportation



Q2-3a: Options in business regarding inputs to rice to address the challenges in Q2-2

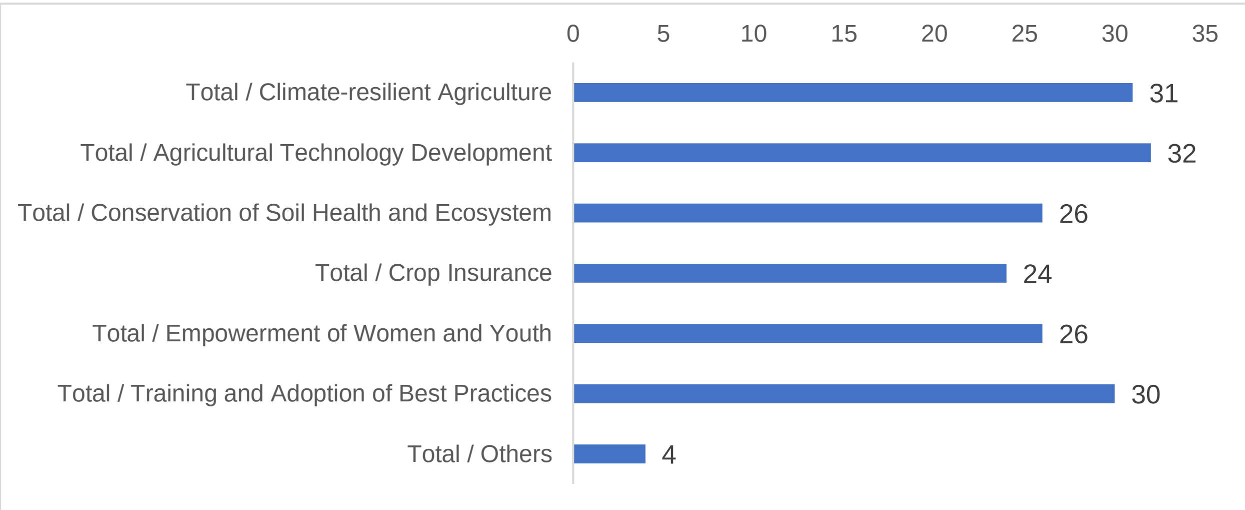
"Information Sharing on Seeds, Technologies, Knowledge and Markets" was the most common answer (32 respondents or 87%) among others, and was followed by the answers "Improving Access to Inputs" (26 or 70%) and "Inputs Subsidy Programs" (25 or 68%).



Q2-3b: Options in business regarding production of rice to address the challenges in Q2-2

Three top reactions were "Agricultural Technology Development" (32 respondents or 87%), "Climate-resilient Agriculture" (31 or 84%) and "Training and Adoption of Best Practices" (30 or 81%). "Others" include the following.

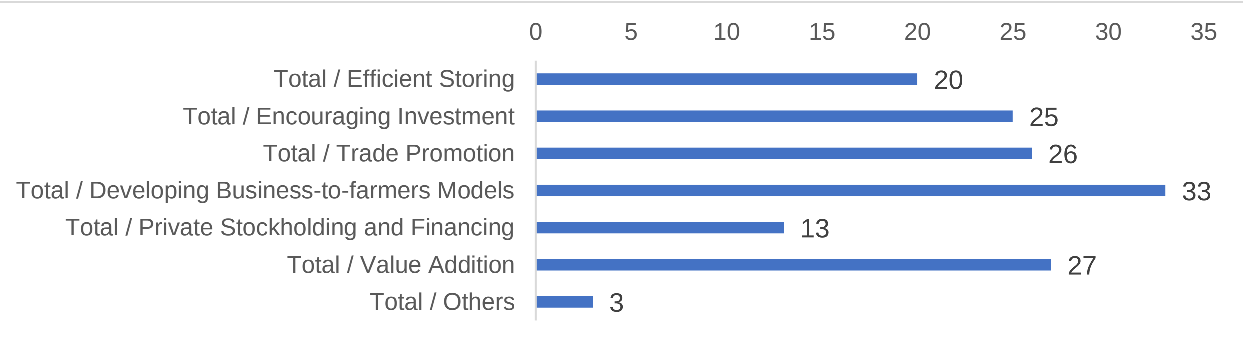
- Carbon markets for forest trees that potentially help promoting rice production through regenerative and/or organic farming
- Provision of climate-smart technology, early warning systems, crop protection mechanisms, farm mechanization and provision of agriculture finance
- Serious government support not just for the sake of output for some government agencies



Q2-3c: Options in business regarding processing of rice to address the challenges in Q2-2

"Developing Business-to-farmers Models" was the most common answer (33 respondents or 89%). Besides this option, "Value Addition" (27 or 73%), "Trade Promotion" (26 or 70%) and "Encouraging Investment" (25 or 68%) were the three major reactions among others. Respondents specified the following as "Others".

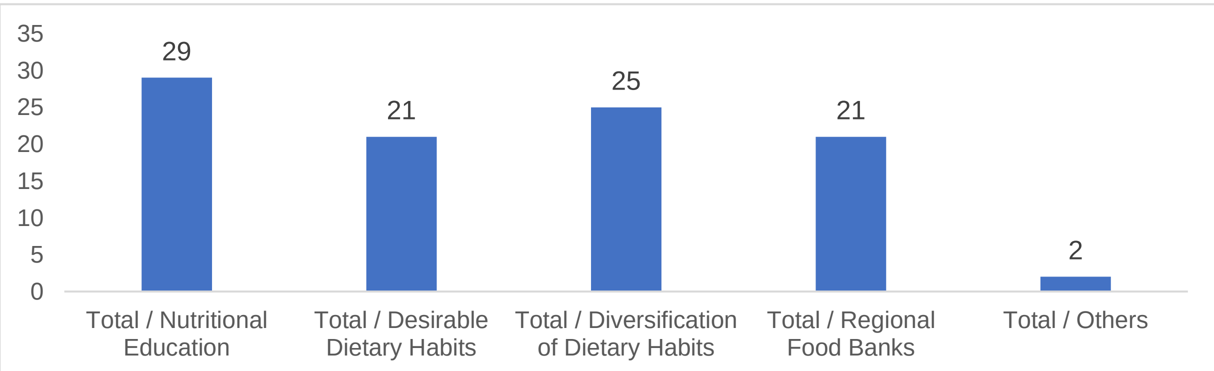
- Strengthening collection center of coops / associations at sub national levels
- Private-sector friendly policy and institution, less bureaucratic process, and support in R&D
- Promotion of local production



Q2-3d: Options in business regarding consumption of rice to address the challenges in Q2-2

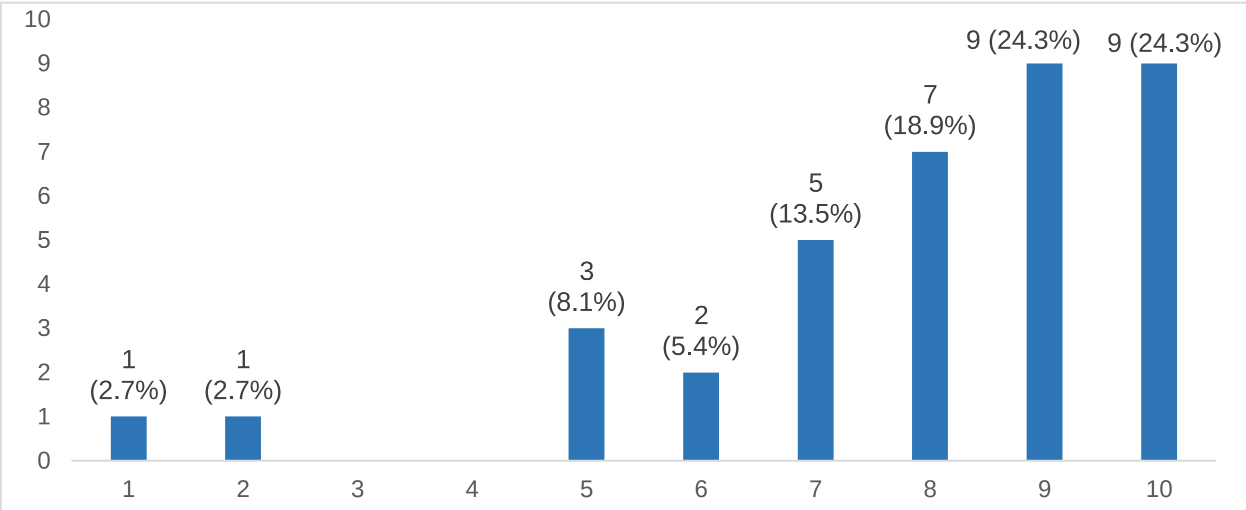
"Nutritional Education" was the most common reaction (29 respondents or 78%) among others, that was followed by "Diversification of Dietary Habits" (25 or 68%). "Others" included the following.

- Awareness on various food preparation methods
- Promotion of long-term contracts with retailers, and PR activities to increase rice consumption



Q3-1: General effect of climate change on rice market

The average of the answers was 7.89. The respondents who answered the option higher than "7" accounted for 30 persons and shared 81.1%, while those who responded the option "1" or "2" were merely 2 persons or 5.4% to the total. This shows well that the stakeholders in the three regions think they were very much affected by climate change.



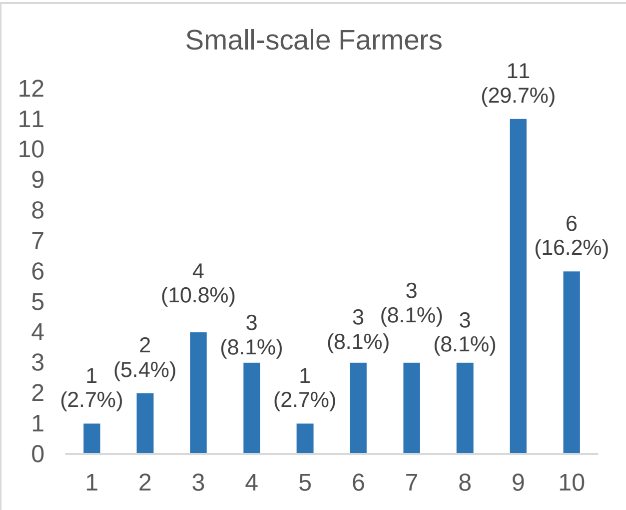
Q3-2: The extent climate change affects different players in the value chain of rice

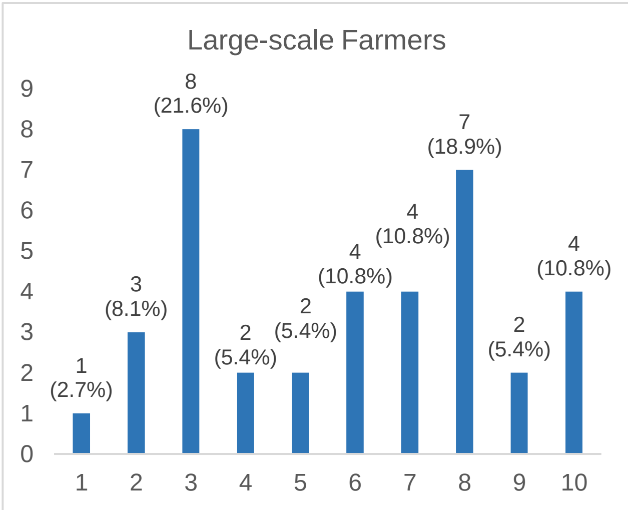
The average of the answers on "Small-scale Farmers" was 6.92, which was the highest figure among the four different players. The most common answer on "Small-scale Farmers" was "9" (11 respondents) that was followed by "10" (6 respondents), which means nearly half of the respondents answered either "9" or "10". This means "Small-scale Farmers" have been most negatively affected by climate change.

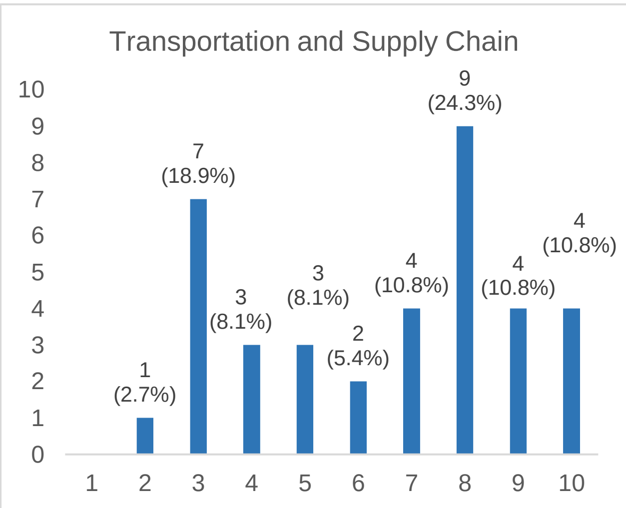
The average of the answers on "Large-scale Farmers" was 5.81, the lowest figure among the four different players. It should be noted that the responses were divided into two poles: those centering the answer "3" (8 respondents) and the answer "8" (7 respondents).

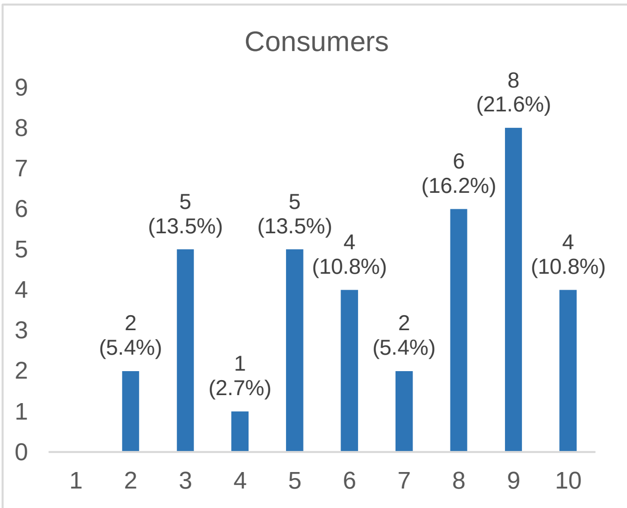
The average of the answers on "Transportation and Supply Chain" was 6.43. The responses were divided into two poles: those centering the answer "3" (7 respondents) and the answer "8" (9 respondents).

On consumers, the average of the answers was 6.65, the second highest next to "Small-scale Farmers". 18 respondents (49%) were in the range between the answers "8" and "10" which shows that respondents considered the effect on "Consumers" was very serious.



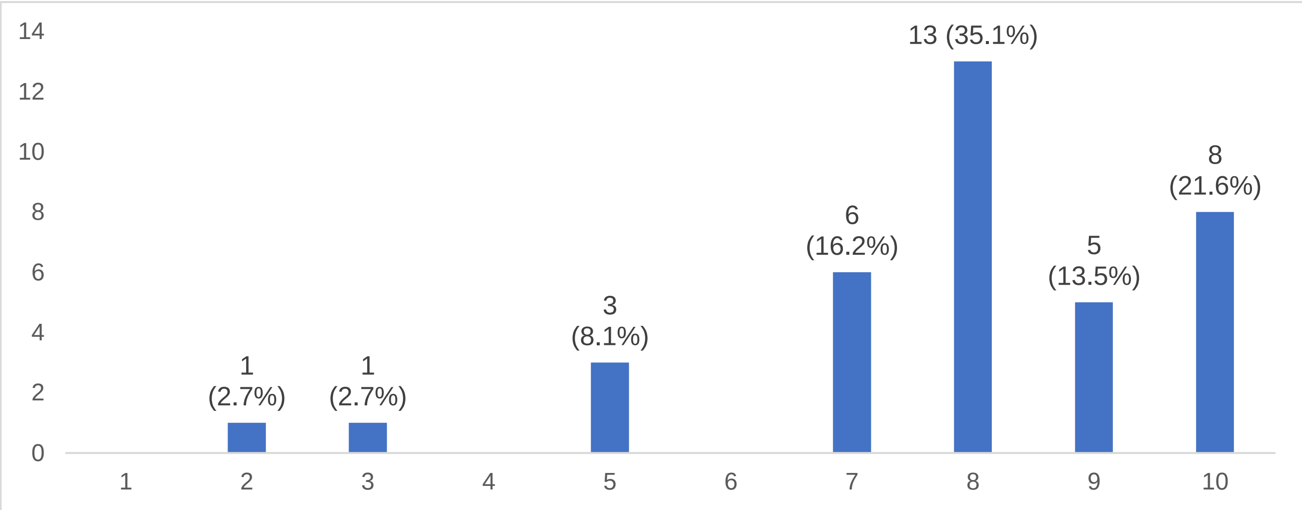






Q4-1: General effect of Covid-19 on rice market

The average of the answers was 7.86. The most common answer was “8” (13 respondents or 35%), and followed by “10” (8 or 22%). The range of answers between the answers “8” and “10” shared over half of the total 37 responses (26 or 70%). It can be said the respondents considered the effect of Covid-19 on rice market was very serious.



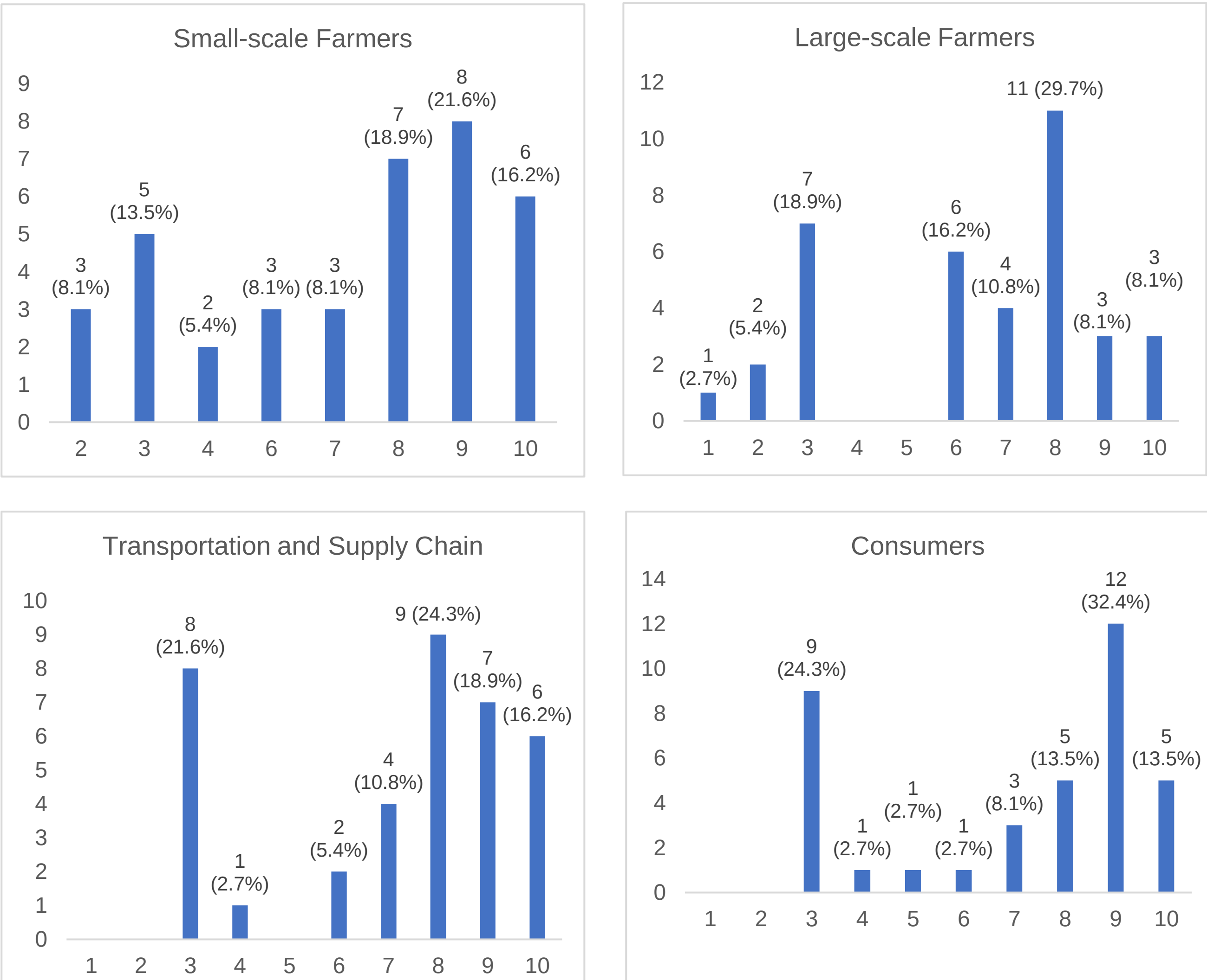
Q4-2: The extent Covid-19 affects different players in the value chain of rice

The average of the answers on “Small-scale Farmers” was 6.92. The most common answer on “Small-scale Farmers” was “9” (8 respondents or 22%) that was followed by “8” (7 or 19%) and “10” (6 or 16%). This means the respondents regarded “Small-scale Farmers” being most negatively affected by climate change.

The average of the answers on “Large-scale Farmers” was 6.35, the lowest figure among others. It should be noted the responses were divided into two poles: those centering “3” (7 or 19%) and “8” (11 or 30%). 21 answers (57%) were in the range between the answers “6” and “8”.

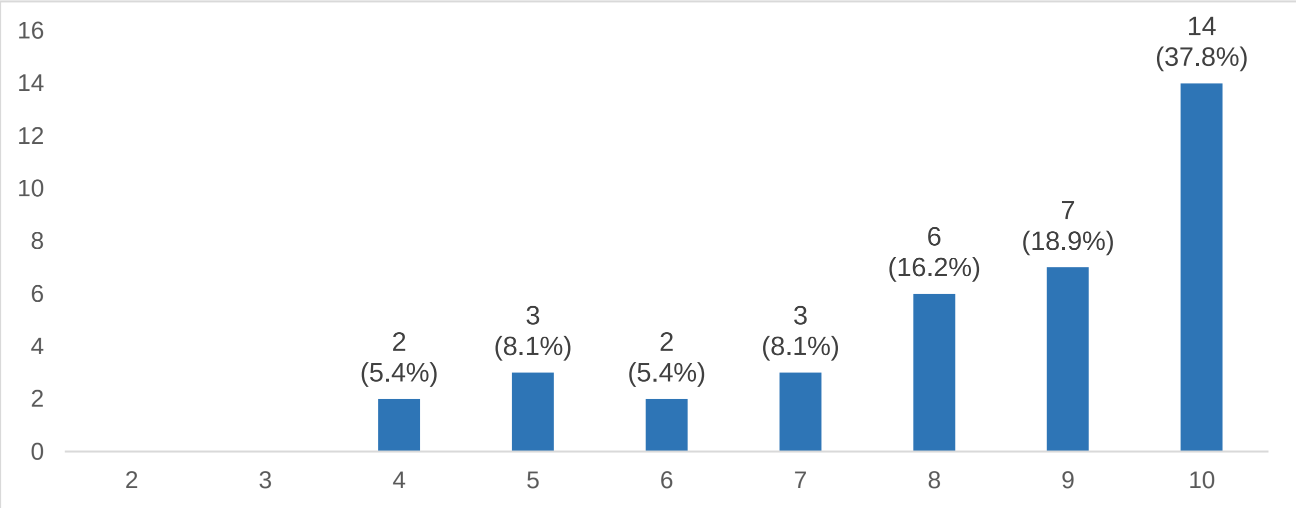
The average of the answers on “Transportation and Supply Chain” was 7.11, the highest figure among others. The responses were divided into two poles: those centering “3” (8 or 22%) and ”8” (9 or 24%). 21 respondents (57%) were in the range between “8” and “10”.

On “Consumers”, the average of the answers was 7.05, the second highest next to “Transportation and Supply Chain”. 22 respondents (59%) were in the range between “8” and “10”.



Q5-1: General effect of price-hike of rice in 2022/23

The average of the answers was 8.30. The most common answer was "10" (14 respondents or 38%), and the range of answers between "8" and "10" accounted for 27 respondents or 73%.



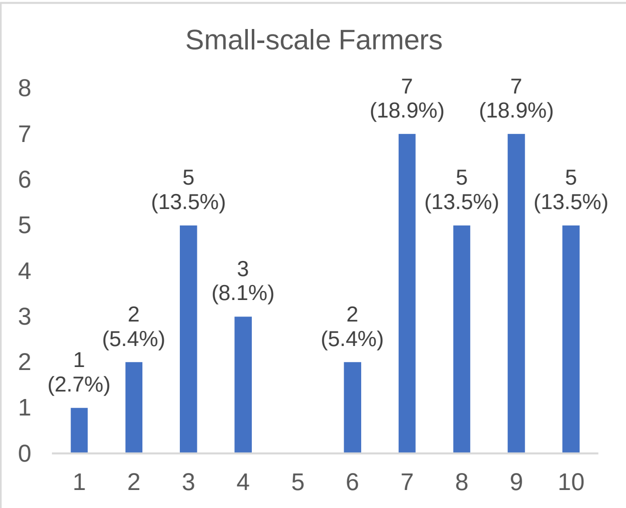
Q5-2: The extent price-hike in 2022/23 affects different players in the value chain of rice

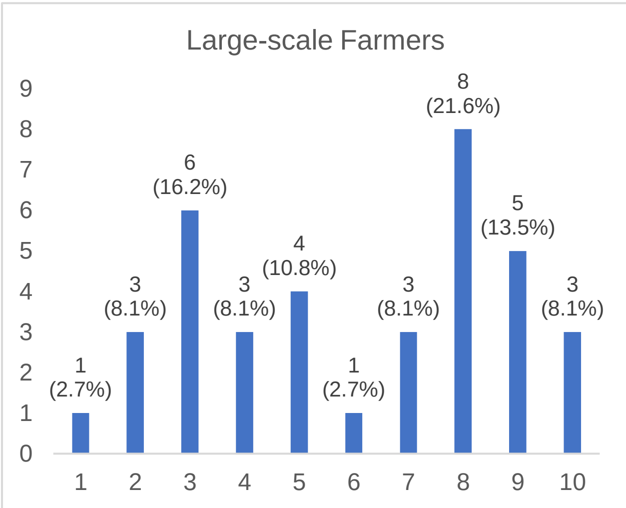
The average of the answers on “Small-scale Farmers” was 6.65. The most common answers on “Small-scale Farmers” were “7” and “9” (7 respondents each).

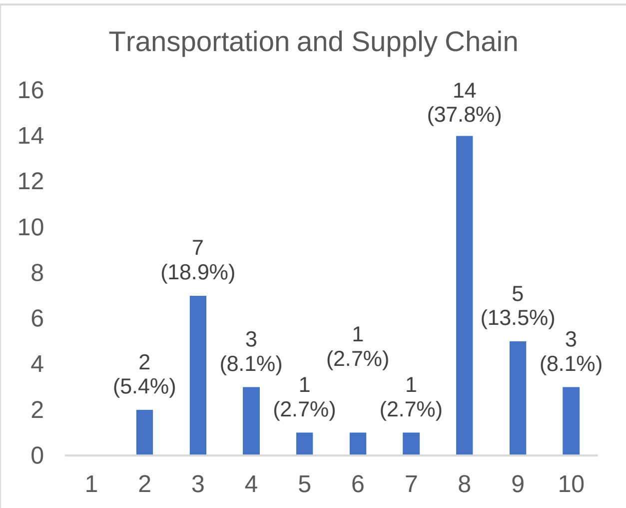
The average of the answers on Large-scale Farmers” was 6.03, the lowest figure among other players. It should be noted that the responses were divided into two poles: those centering “8” (8 respondents) and “3” (6 respondents).

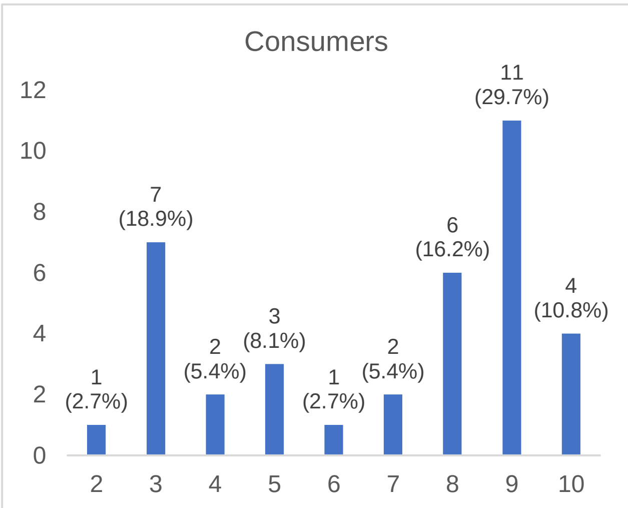
The average of the answers on “Transportation and Supply Chain” was 6.54. The responses were divided into two poles: those centering “8” (14 respondents) and “3” (7 respondents). 22 respondents (59%) answered the number between “8” and “10”, and 11 respondents (31%) between “3” and “5”.

On “Consumers”, the average of the answers was 6.84, which was the highest figure among other players. 21 respondents (57%) answered the number in the range between “8” and “10”.





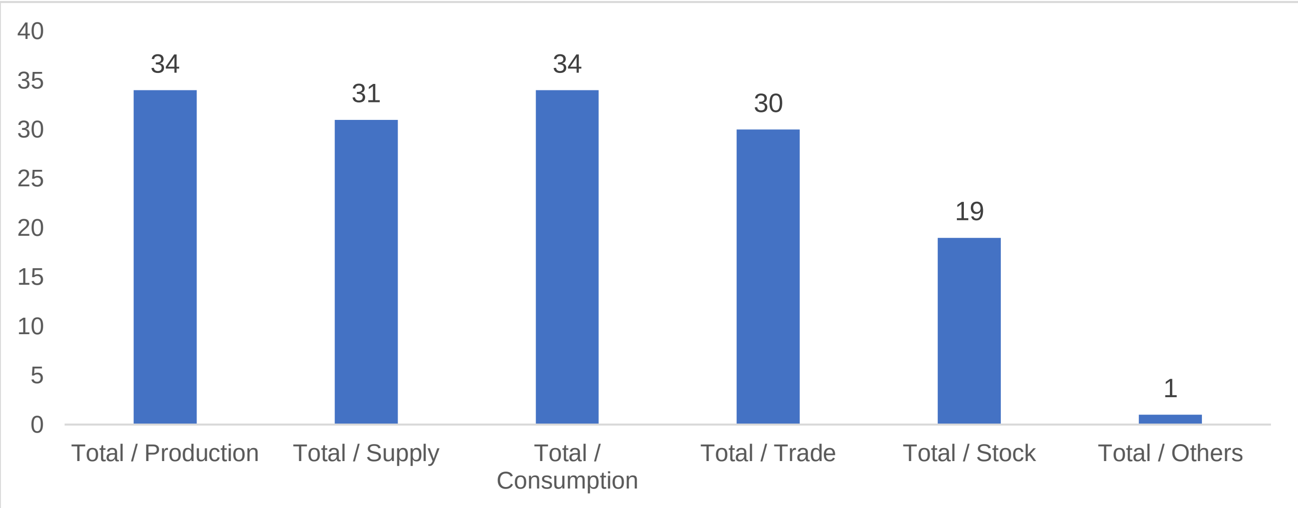




Q6-1a: Which type of market information regarding rice stakeholders are dependent?

The most common answers were "Production" and "Consumption" both of which accounted for 34 respondents or 92% to the total. 31 respondents or 84% chose "Supply" and 30 respondents or 81% chose "Trade". The following was the answer of "Others".

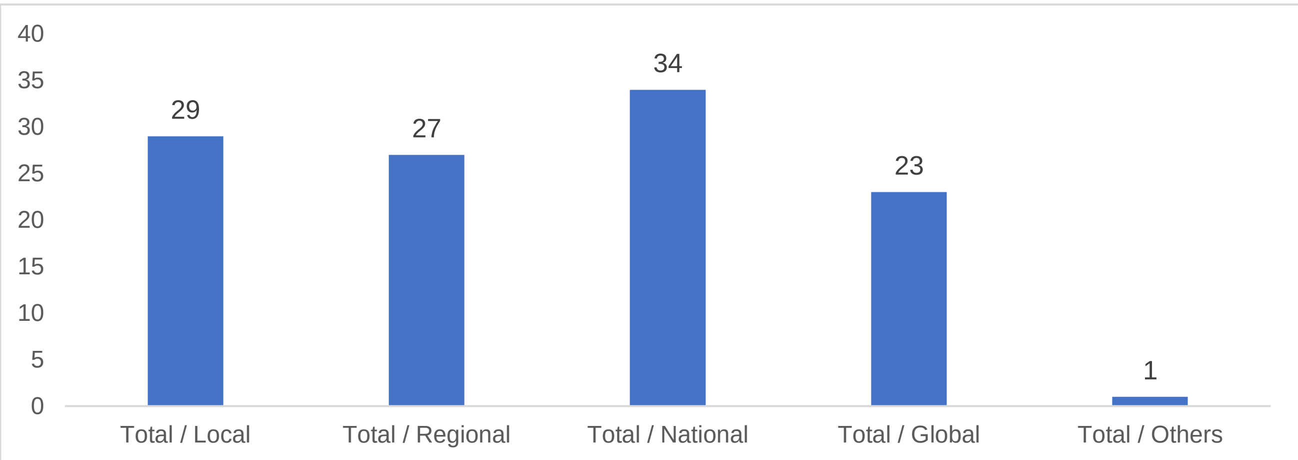
- Market trend at national level and international food grain price



Q6-1b: Which level of market information regarding rice stakeholders are dependent?

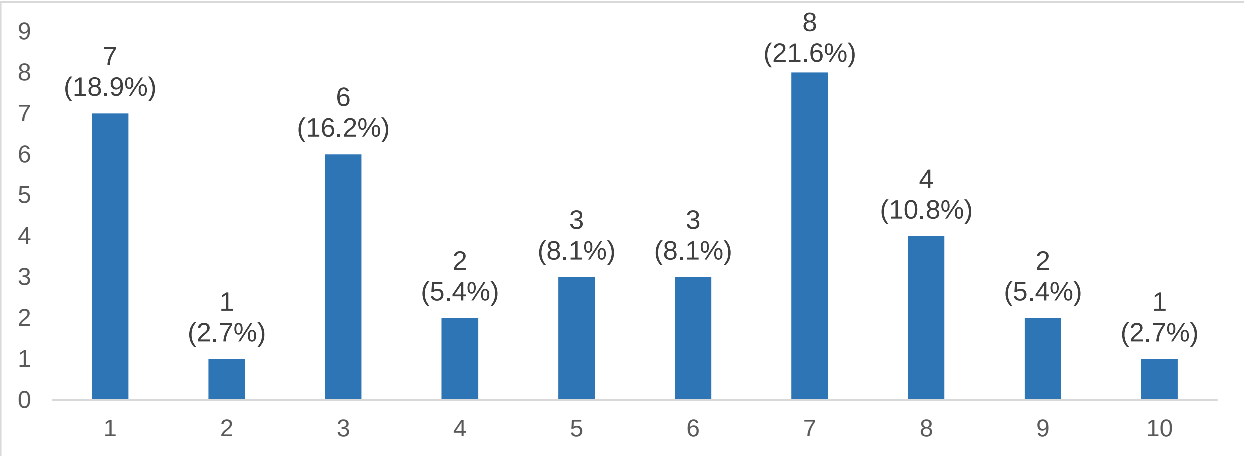
The respondents answered in the order of "National" (34 respondents or 92%), "Local" (29 or 78%), "Regional" (27 or 73%), and "Global" (23 or 62%). The following was the answer of "Others".

- The cooperative sector and the private sector



Q6-2: How much stakeholders rely on market information of rice?

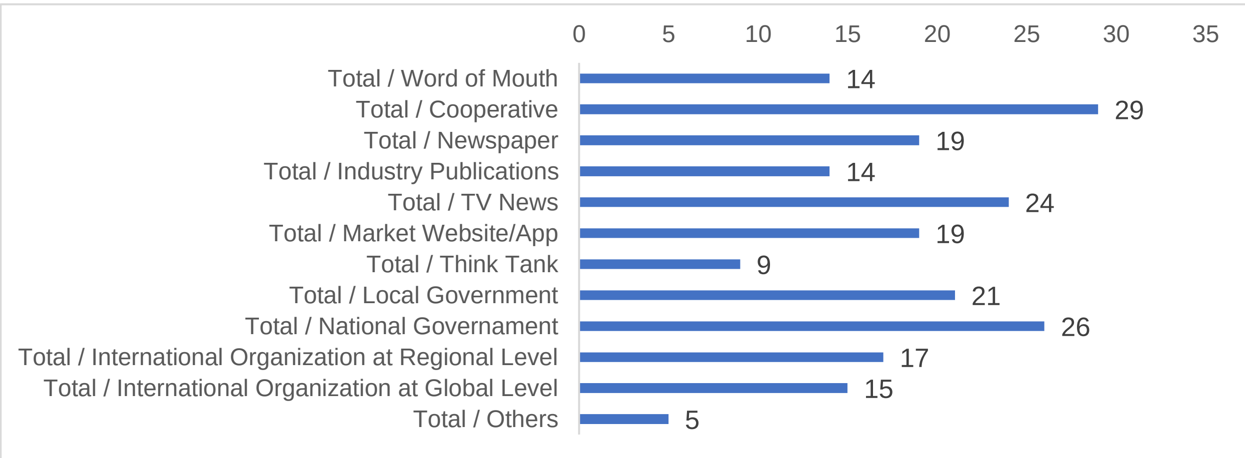
The average of the answer was 4.97 which showed they were rather dependent on market information. There were three poles in the distribution of answers, namely "7" (8 respondents or 22%), "1" (7 or 19%) and "3" (6 or 16%), that made it difficult to grasp the overall trend. There was no common range of answers to this question too.



Q6-3: Which sources of market information of rice stakeholders rely on?

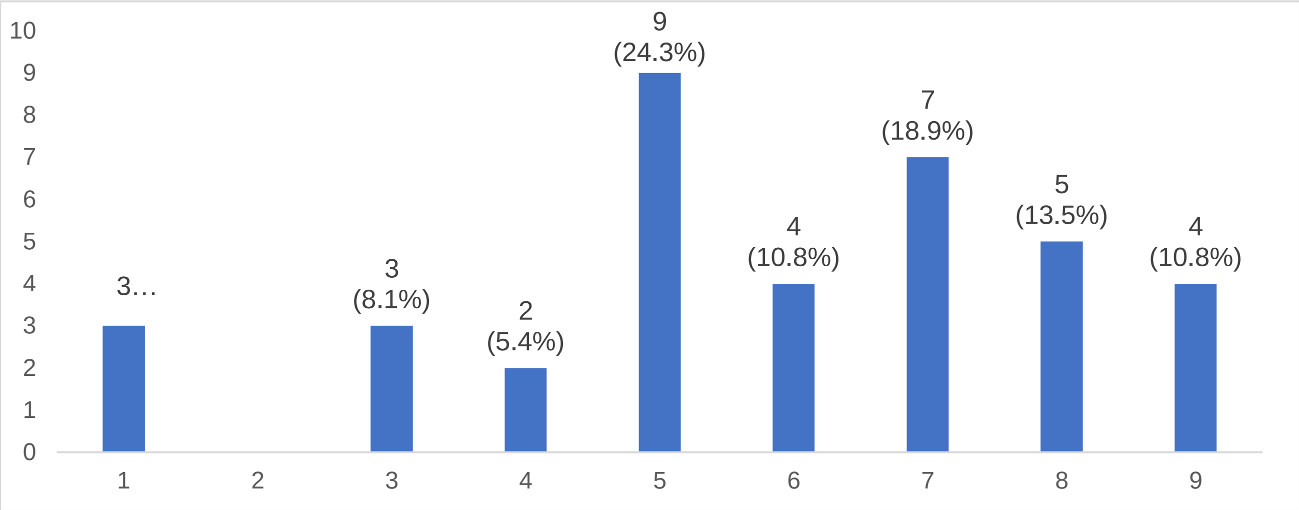
Many respondents chose "Cooperative" (29 respondents or 78%) to be their source of market information, which was followed by "National Government" (26 or 70%), "TV News" (24 or 65%), and "Local Government" (21 or 57%) in that order. "Others" were specified as follows.

- UN agency at national level
- Our own intelligence and market survey
- Information by enterprise/company
- Fellow farmers and traders
- According to the business results of the company



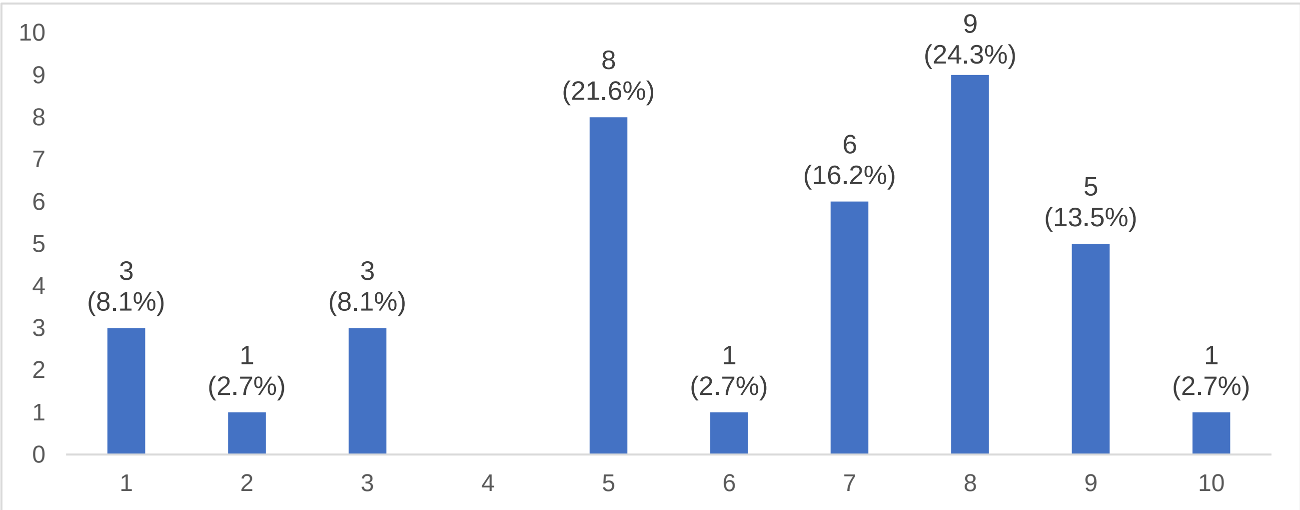
Q6-4a: How transparent the market of rice is?

The average of the answers was 5.78, and the most common response was “5” (9 respondents or 24%). However, the responses were scattered throughout.



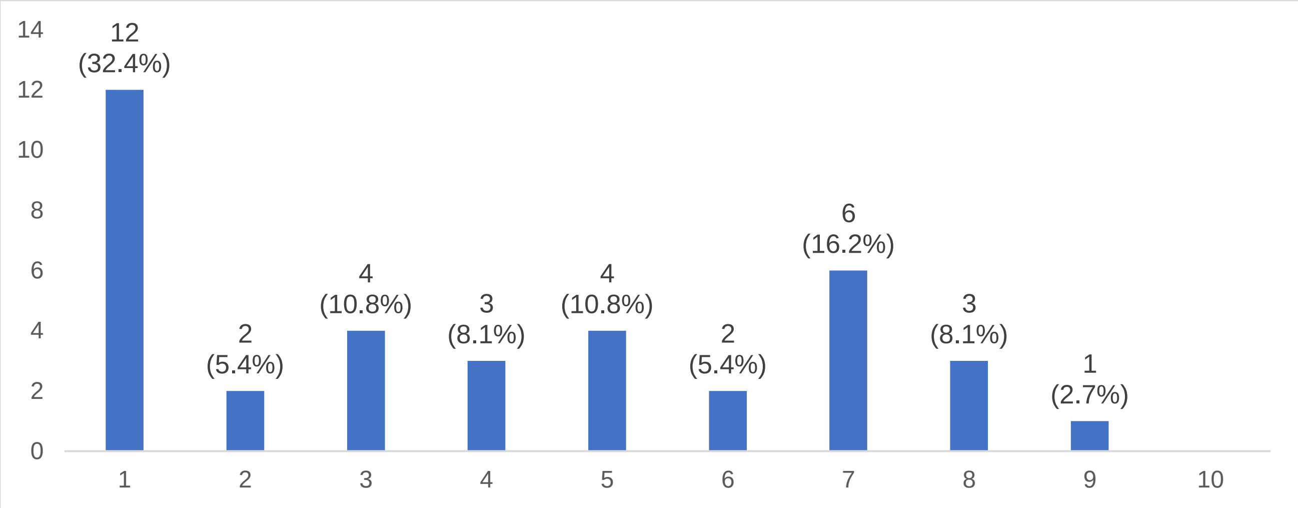
Q6-4b: Is market transparency sufficient enough to understand market conditions of rice?

The average of the answers was 6.19. The most common answer was “8” (9 respondents or 24%), and over half of the respondents answered the number in the range of “7” and ”9” (20 or 54%).



<u>Q6-5: How effective are public-private partnerships and networking in the value chain of rice?</u>

The average was 3.97 that showed the respondents considered public-private partnerships and networking are somewhat useful. The most common answer was “1” (12 respondents) followed by “7” (6 respondents). [2, 3]



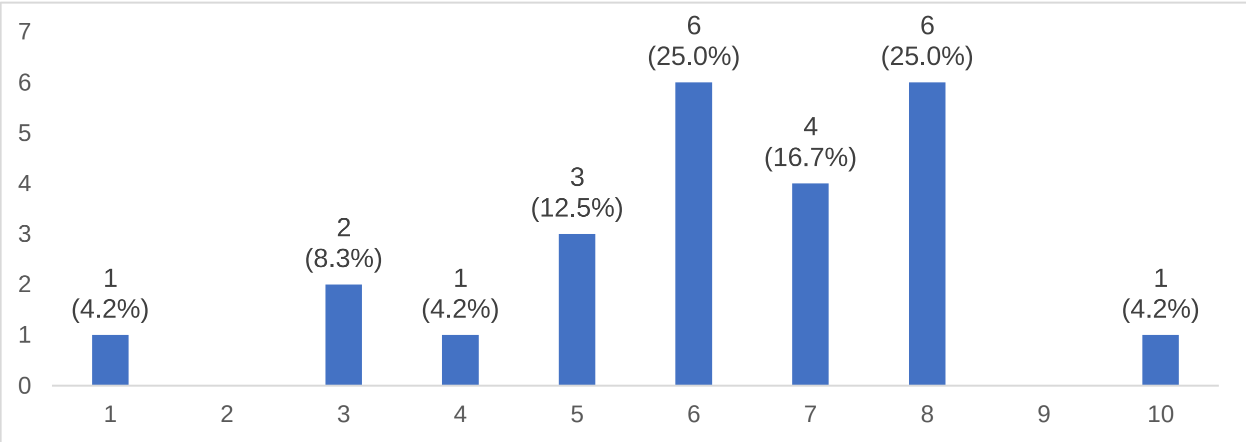
[2] Dr. Jumtip Seneerattanaprayul, Department of Agricultural and Resource Economics, Faculty of Economics, Kasetsart University commented at the workshop on rice in December, 2023, in Bangkok, Thailand, that direct marketing of the product from cooperatives to consumers could be an effective way to promote the product farmers produced. She told this could be done on the website. Digital platform would also be an effective way to reduce the power of middlemen.

[3] Mr. Balu Iyer, Regional Director, International Cooperative Alliance (ICA) Asia and the Pacific commented at the workshop on rice in December, 2023, in Bangkok, Thailand, that it is necessary to consider how do we collect data and also transmit it back to farmers. In this respect, he pointed out using technologies such as mobile apps and other online platforms would be effective. Also, education and training on best practices would be useful way to take advantage of partnerships and networking.

ii. Maize (24 answers)

<u>Q2-1: Market conditions of maize in the last 10-20 years</u>

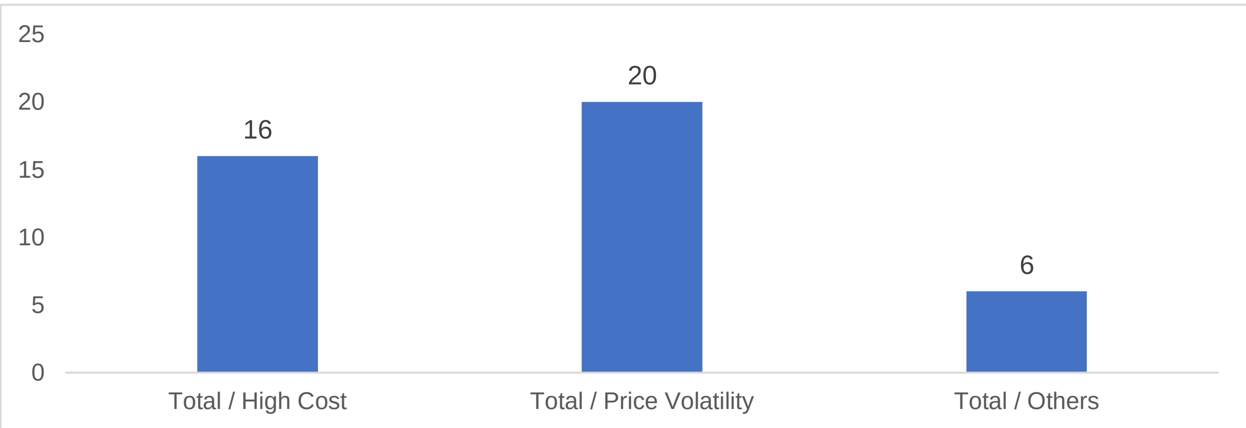
The average of the answer was 6.17, and the highest scores were “6” (6 respondents or 25%) and “8” (6 respondents or 25%) followed by “7” (4 or 16.7%). The range of answers between “6” and ”8” accounted 16 respondents or 67% of the total.



<u>Q2-2a: Challenges in terms of inputs to maize to address market conditions in Q2-1</u>

“Price Volatility” was selected by 20 respondents on maize followed by “High Cost”. Respondents specified the following as “Others”.

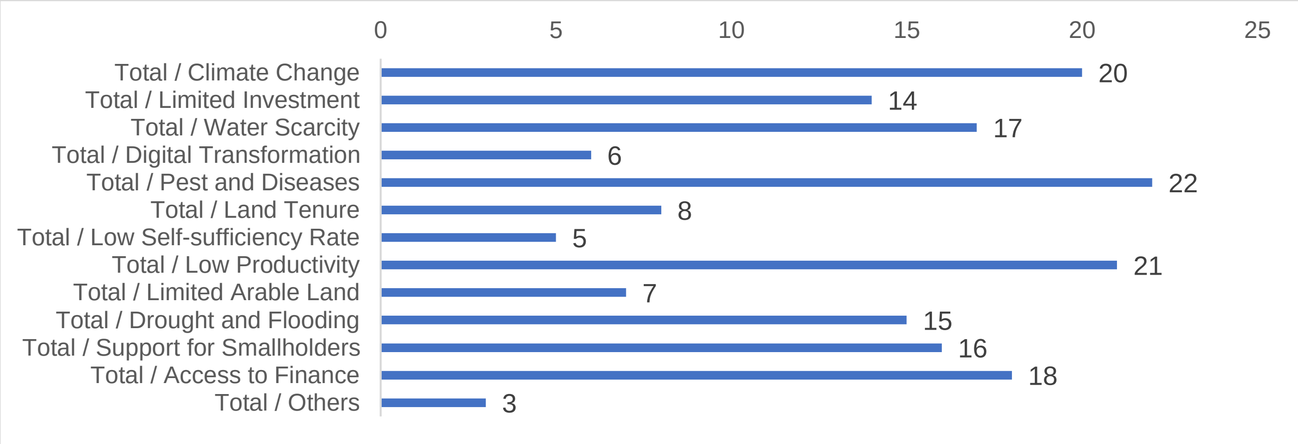
- Performance on seasonal production in other regions
- Small sizes of small holder farmers
- Government regulations, Policy risks
- Scarcity due to drought causes inadequate production



Q2-2b: Challenges in terms of production of maize to address market conditions in Q2-1

Among the 12 options, "Pest and Diseases" was the highest result chosen by 22 respondents. Of rice, "Pest and Diseases" was the seventh highest, indicating how vulnerable maize is to pest and diseases. This option was followed by "Low Productivity" (21 respondents) and "Climate Change" (20 respondents). Respondents specified the following as "Others".

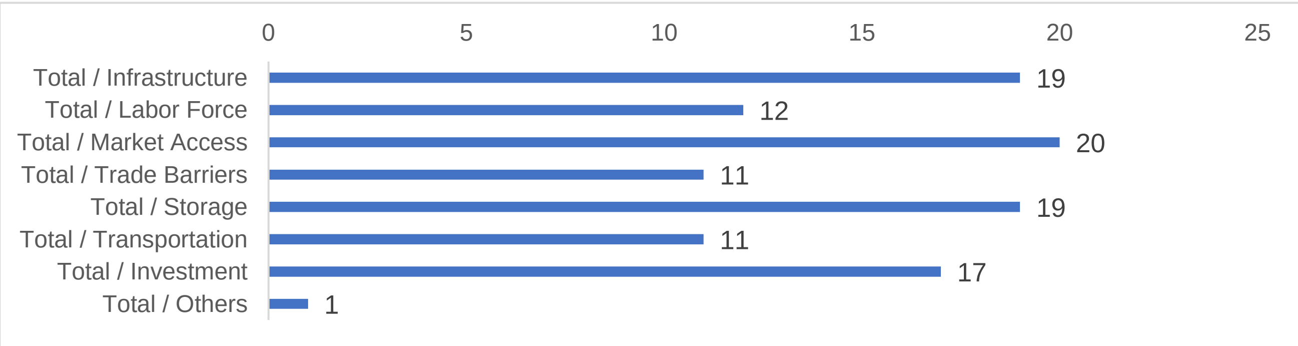
- Weak agronomy and extension system
- Elephants threat



Q2-2c: Challenges in terms of processing of maize to address market conditions in Q2-1

"Market Access" (20 respondents), "Infrastructure" (19 respondents) and "Storage" (19 respondents) were the top 3 answers, while "Trade Barriers" and "Transportation" (11 respondents each) and "Labor Force" (12 respondents) were the bottom three answers. Respondents specified the following as "Others".

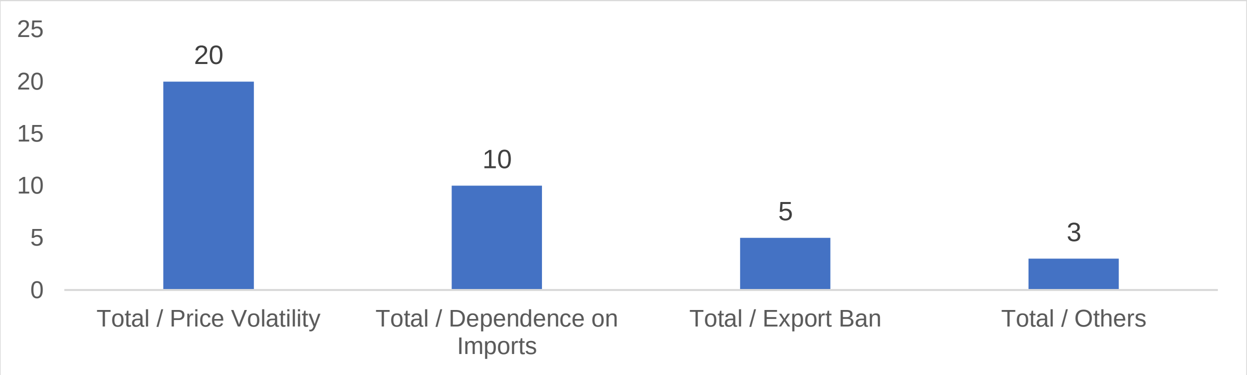
- Informality and unstructured markets



Q2-2d: Challenges in terms of consumption of maize to address market conditions in Q2-1

20 respondents out of 24 (or 83%) answered "Price Volatility" was the most challenge, followed by "Dependence on Imports" (10 or 42%). Respondents specified the following as "Others".

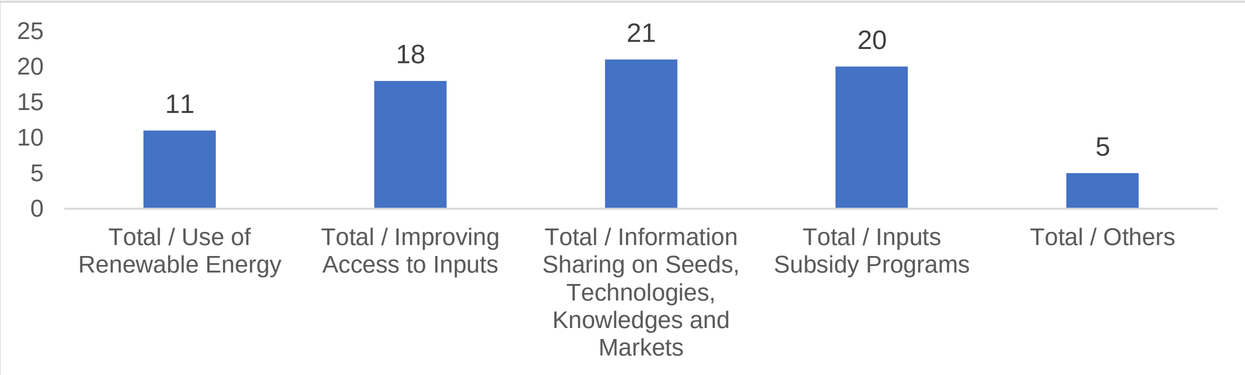
- Lack of Hybrid Seeds
- Informality
- Need for incentives for production of good quality grain



Q2-3a: Options in business regarding inputs to maize to address the challenges in Q2-2

"Information Sharing on Seeds, Technologies, Knowledge and Markets" was the most common answer (21 respondents or 88%) among others, and was followed by the answers "Inputs Subsidy Programs" (20 or 83%) and "Improving Access to Inputs" (18 or 75%). Details for respondents who selected "Others" are as follows.

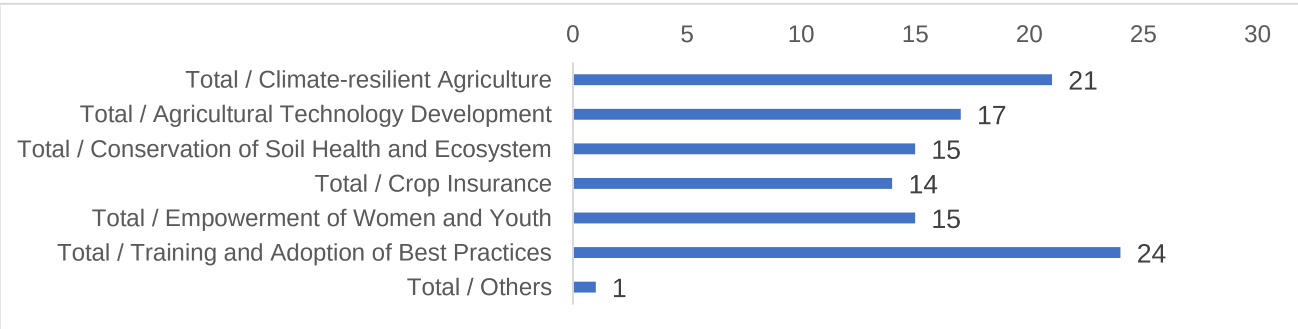
- Financial Support to establish agro-input shops for the farmers to access services near to the community level, training of the community changing agents/Community Based Trainers
- Constructing solar powered irrigation schemes
- Aggregation and large-scale commercial production
- Improve access to soft loans



Q2-3b: Options in business regarding production of maize to address the challenges in Q2-2

"Training and Adoption of Best Practices" was chosen by every respondent (24 respondents or 100%), followed by "Climate-resilient Agriculture" (21 or 88%). "Others" include the following.

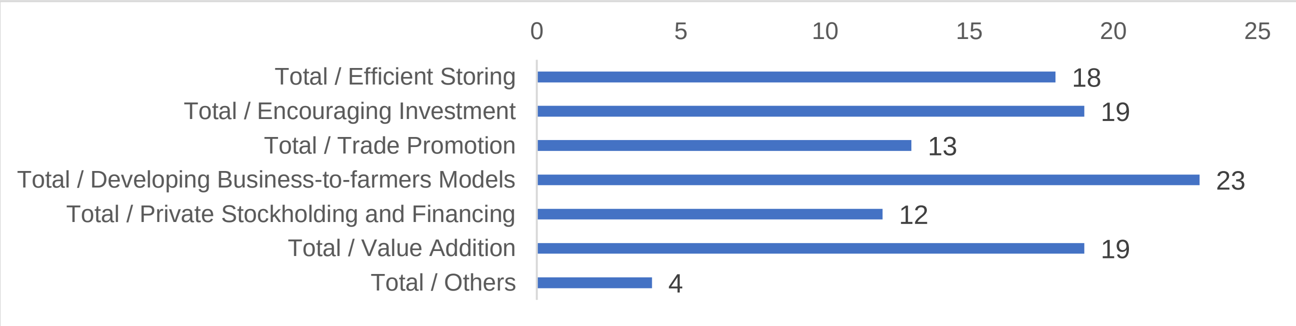
- Providing soft loans for inputs



Q2-3c: Options in business regarding processing of maize to address the challenges in Q2-2

Almost all respondents chose "Developing Business-to-farmers Models" (23 respondents or 96%). "Encouraging Investment" (19 or 79%), "Value Addition" (19 or 79%) and "Efficient Storing" (18 or 75%) were following major reactions among others. Respondents specified the following as "Others".

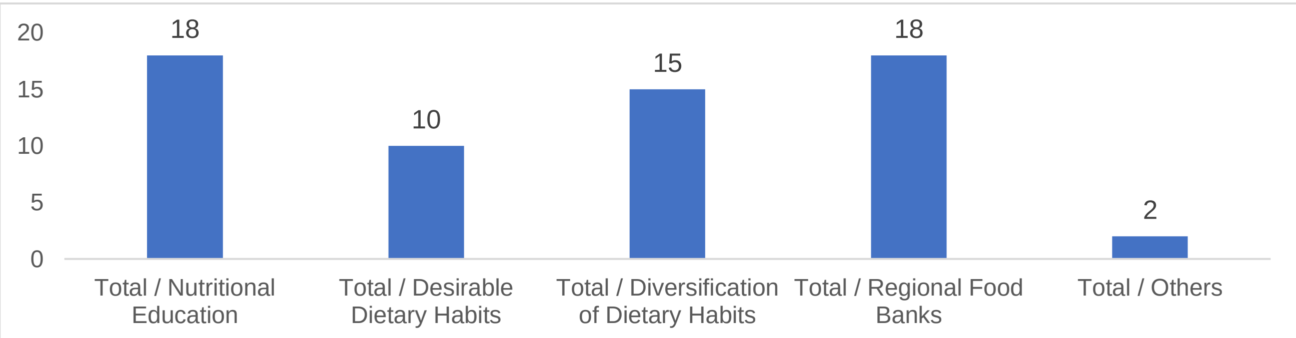
- Invest in post-harvest handling technologies, infrastructure development such as roads network
- Aggregators as a conduit for technology transfer
- Improvement of road infrastructure
- Capacity building (training and education)



Q2-3d: Options in business regarding consumption of maize to address the challenges in Q2-2

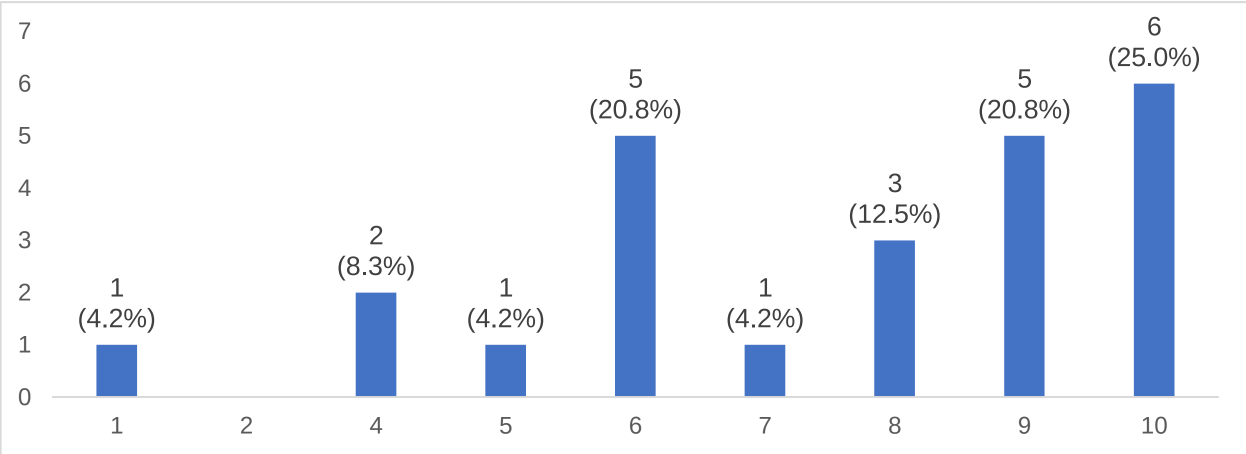
"Nutritional Education" and "Regional Food Banks" were the most common reaction (18 respondents or 75%) among others, followed by "Diversification of Dietary Habits" (15 respondents or 63%). "Others" include the following;

- Ensuring quality grain from farm to reduce storage losses and mycotoxins
- Promoting fortified whole grains



Q3-1: General effect of climate change on maize market

The average of the answers was 7.50, the lowest figure among rice (average 7.89) and wheat (average 8.00), but was still the high figure. There were two poles in the distribution of answers, namely “6” (5 respondents or 21%) and “9” (5 respondents or 21%) / ”10” (6 respondents or 25%).



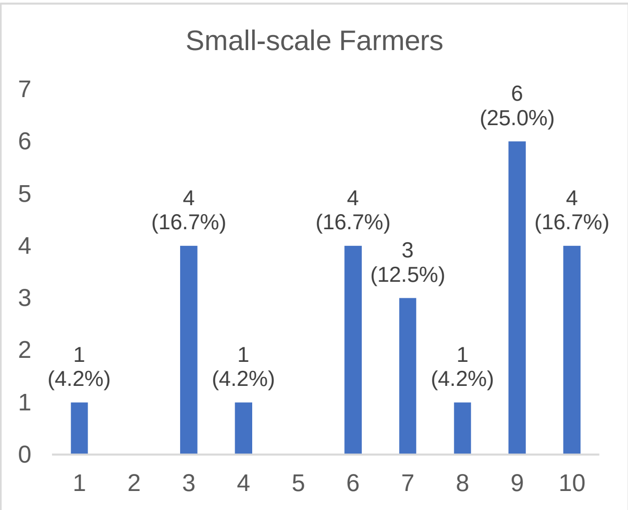
<u>Q3-2: The extent climate change affects different players in the value chain of maize</u>

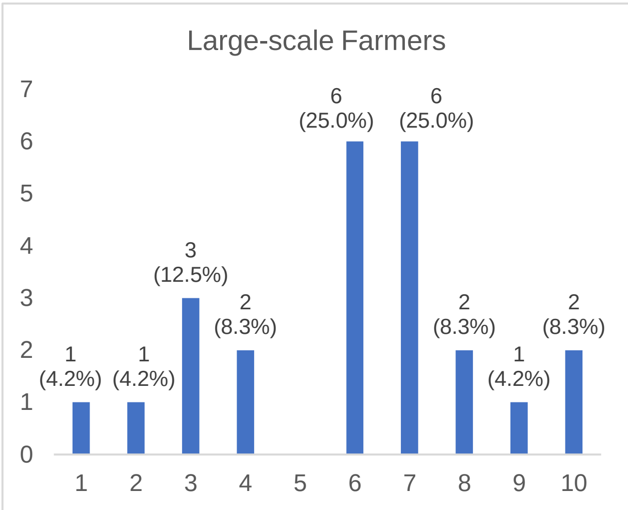
The average figure on “Small-scale Farmers” was 6.83, which was the highest figure among the four different players. The most common answer on “Small-scale Farmers” was “9” (6 respondents or 25%).

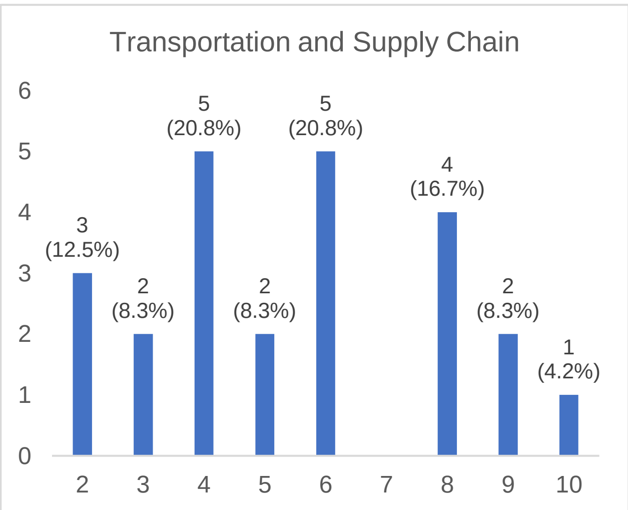
The average of the answers on “Large-scale Farmers” was 5.96, and the most common answers were “6” and “7” (6 respondents or 25% each). These are the peaks, and the graph is shaped like a mountain.

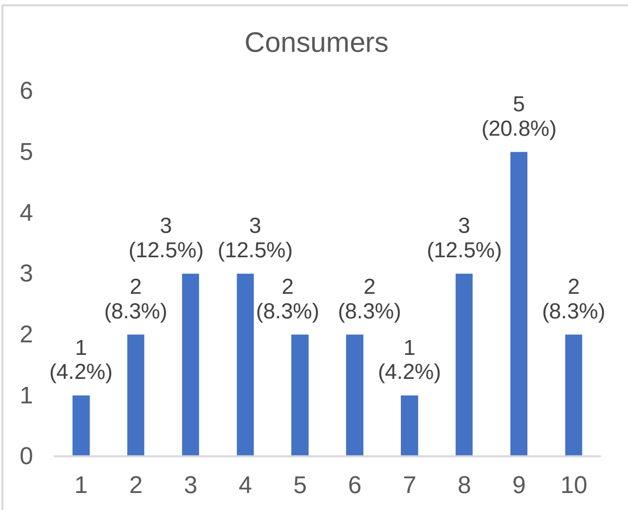
The average of the answers on “Transportation and Supply Chain” was 5.50, the lowest figure among the four different players.

On “Consumers”, the average of the answers was 6.00, the second highest next to “Small-scale Farmers”. The response of “9” was the highest among others, while the other responses remained almost identical.



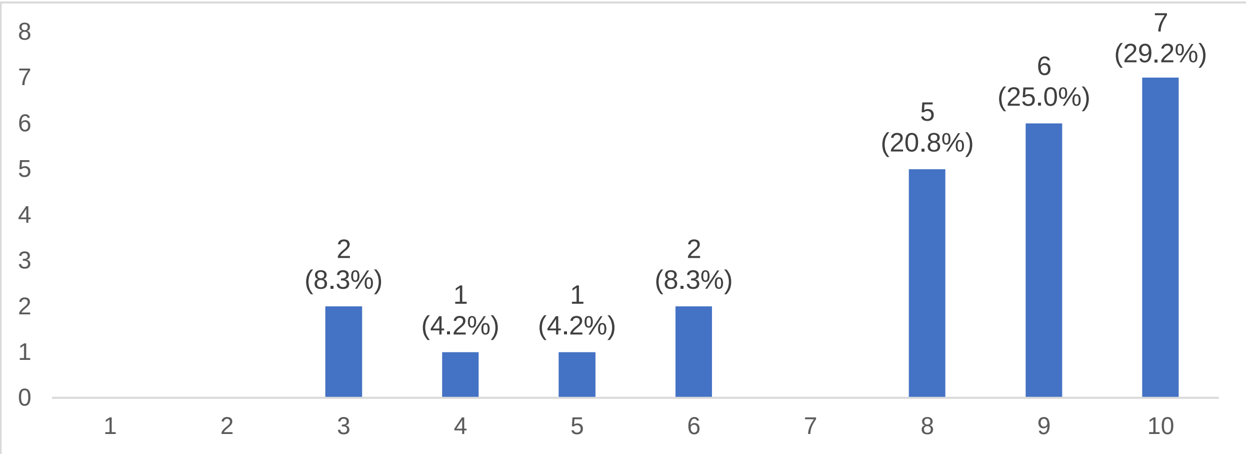






<u>Q4-1: General effect of Covid-19 on maize market</u>

The average of the answer was 7.96. The most common answer was "10" (7 respondents or 29%), and the range of answers between "8" and "10" accounted for 18 respondents or 75%. Comparing results for rice, maize and wheat, the impact of Covid-19 on maize was the most significant.



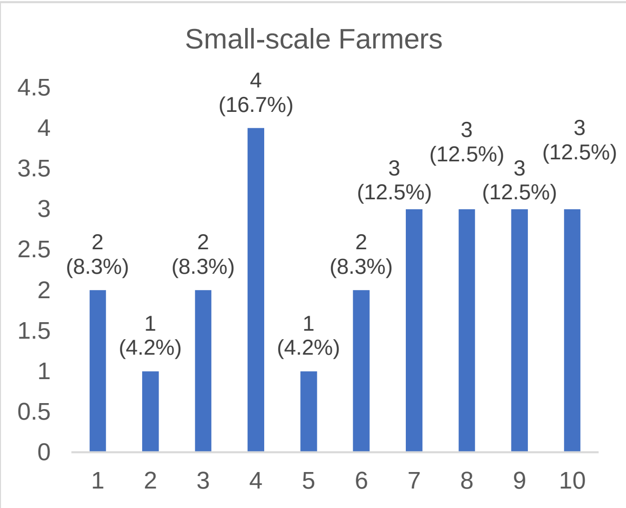
Q4-2: The extent Covid-19 affects different players in the value chain of maize

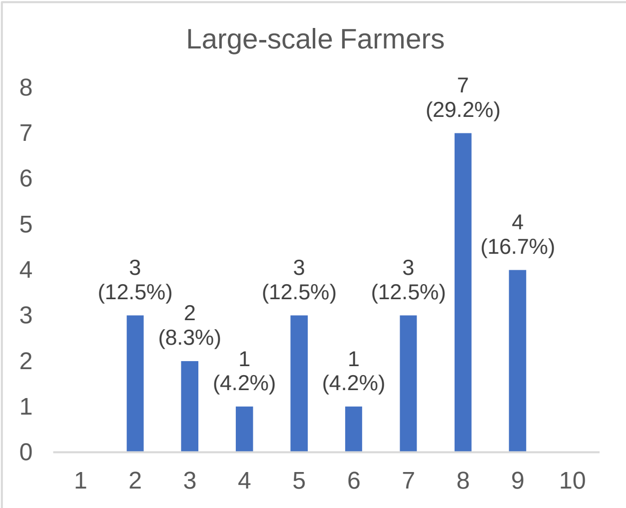
The average figure on “Small-scale Farmers” was 6.04, the lowest figure among others. The most common answer was “4” (4 respondents or 17%). Overall, however, a relatively large number of responses ranged from “7” to “10”.

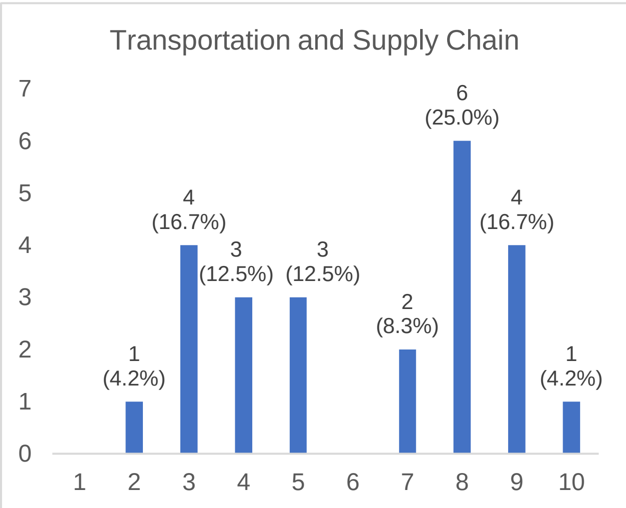
The average of the answers on “Large-scale Farmers” was 6.25, the highest figure among others.

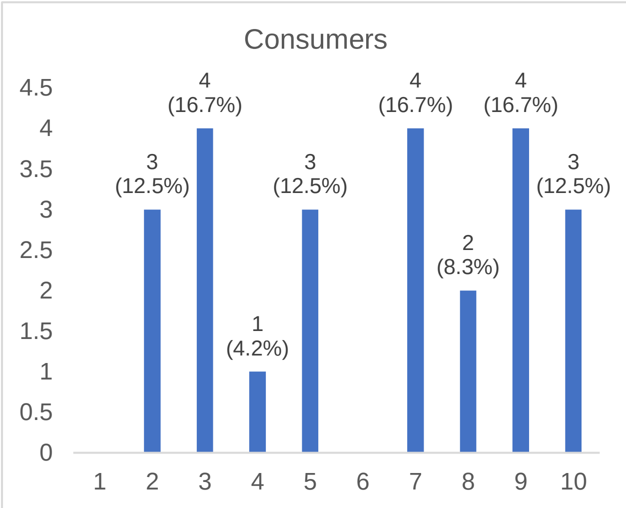
On “Transportation and Supply Chain”, the average was 6.21. And the result was divided into two groups: the range of “2” to “5” and the range of “7” to “10”.

The average of the “Consumers” was 6.13. And also, the result was divided into two groups: the range of “2” to “5” and the range of “7” to “10”.



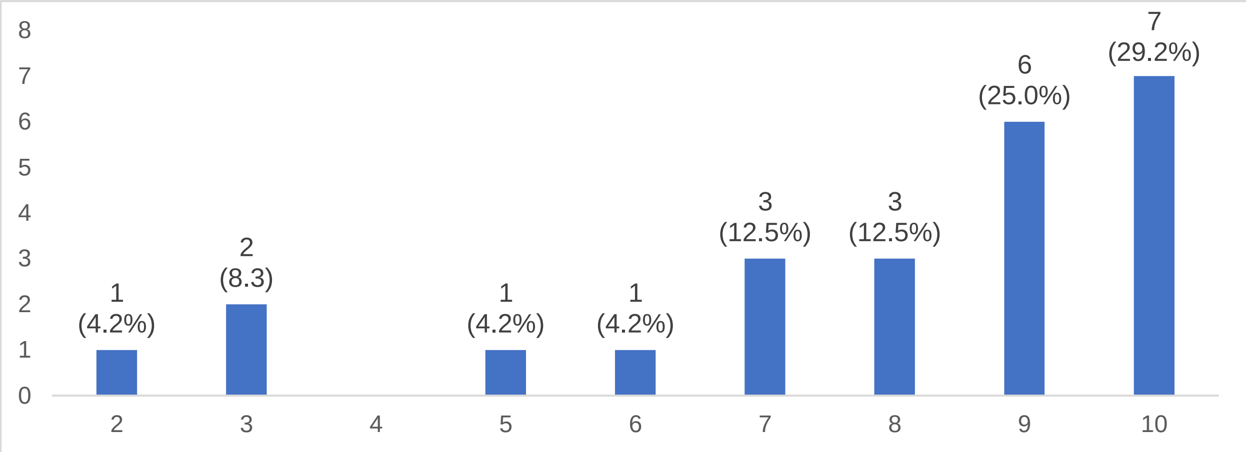






5-1: General effect of price-hike of maize in 2022/23

The average of the answer was 7.83. The most common answer was “10” (7 respondents or 29%), and the range of answers “9” and “10” accounted for 13 respondents or 54%. Compared to the result of rice (average 8.30), maize is similarly on the right side of the curve, but is more scattered overall.



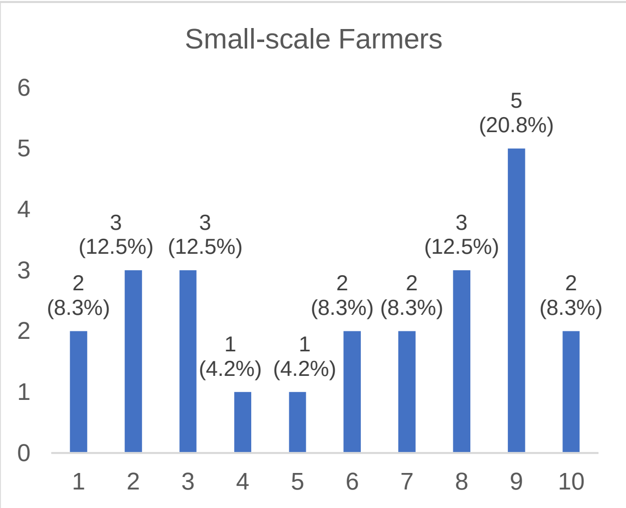
Q5-2: The extent price-hike in 2022/23 affects different players in the value chain of maize

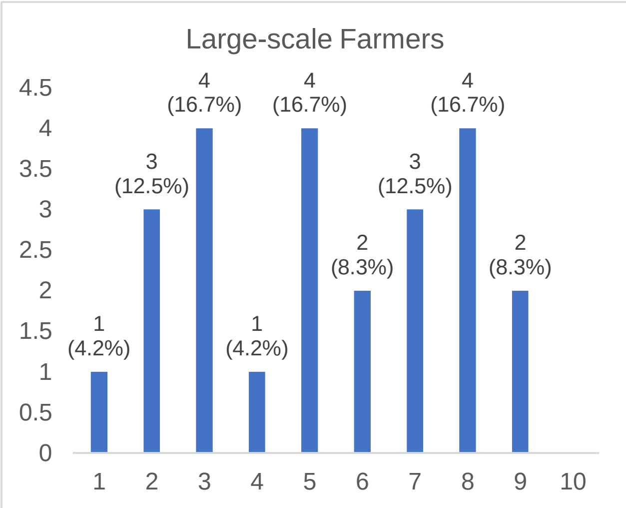
The average figure on “Small-scale Farmers” was 5.88. The most common answers were “9” (5 respondents or 21%).

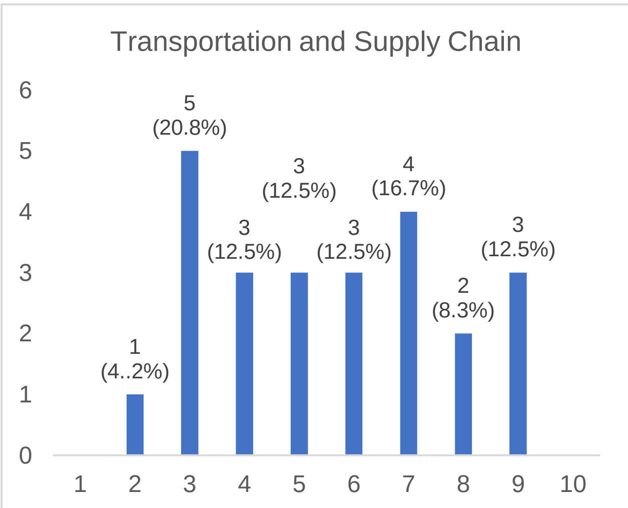
The average of the answers on “Large-scale Farmers” was 5.25, the lowest figure among others. It should be noted that the responses were divided into three poles: “3”, “5” and “8” (4 respondents or 17% each).

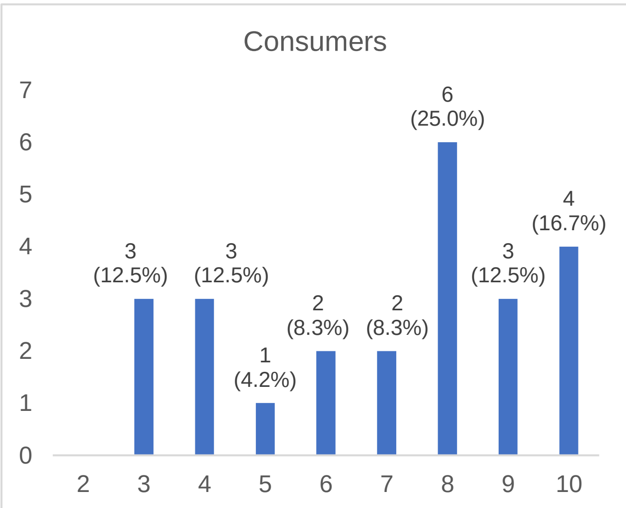
The average answer on “Transportation and Supply Chain” was 5.54, and the most common answers were “3” (5 respondents or 21%). It is remarkable that the most common response for rice was “8” (page 37), while for maize it was “3”, relatively speaking, the opposite.

On “Consumers”, the average of the answers was 6.96, the highest figure among others. And the most common answers were “8” (6 respondents or 25%).





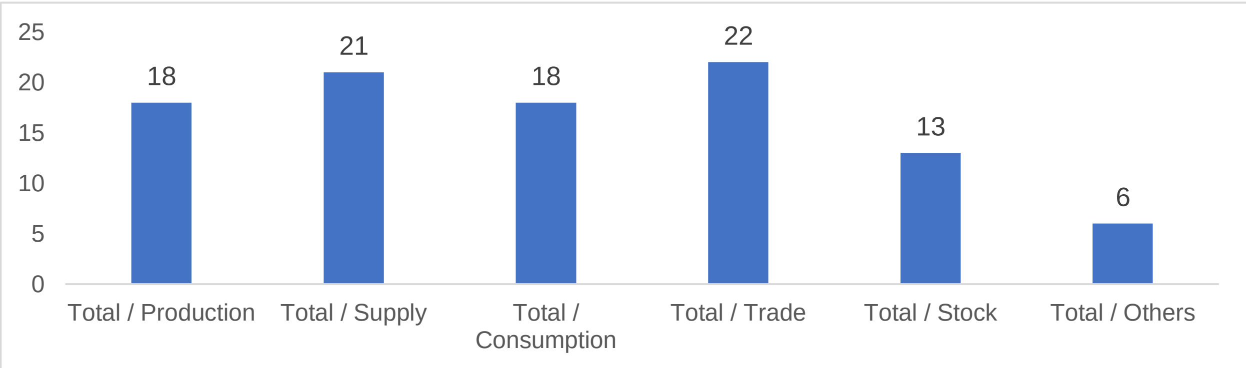




Q6-1a: Which type of market information regarding maize stakeholders are dependent?

The most common answers were "Trade" (22 respondents or 65%), followed by "Supply" (21 respondents or 62%). The answers were contrary to those on rice, and this results, we believe, is a dense reflection of strong interest on the information relevant to the market. The following was specified as the answer "Others".

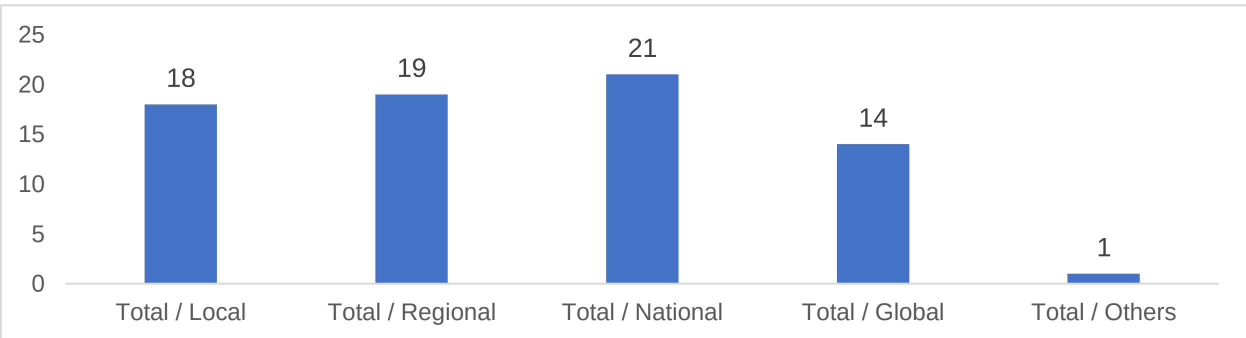
- Market price, accessibility of the product, quality
- Fuel and Geopolitics
- Level of mycotoxin and potential rejection of grain due to poor quality
- Currency
- Advertising
- Awareness creation



Q6-1b: Which level of market information regarding maize stakeholders are dependent?

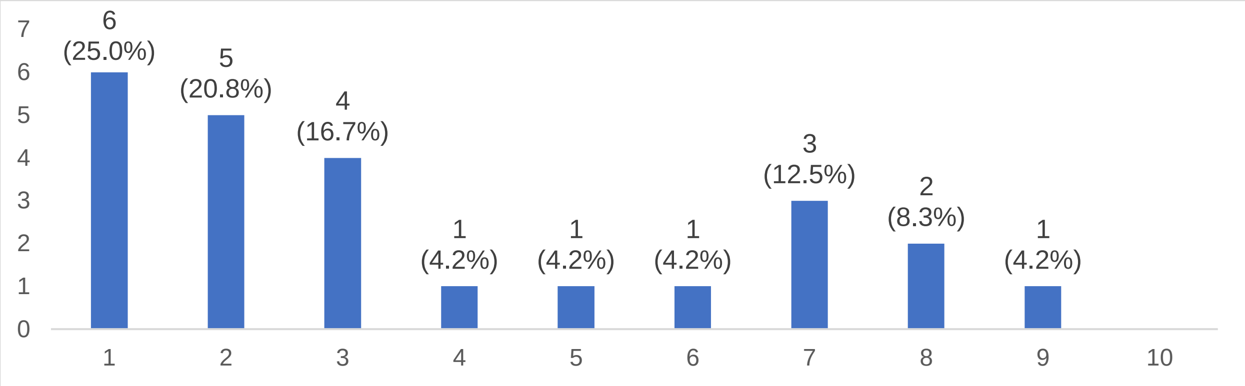
The respondents answered in the order of "National" (21 respondents or 88%), "Regional" (19 respondents or 79%), "Local" (18 respondents or 75%) and "Global" (14 respondents 58%). The following was the specific answer of "Others".

- Household level



Q6-2: How much stakeholders rely on market information of maize?

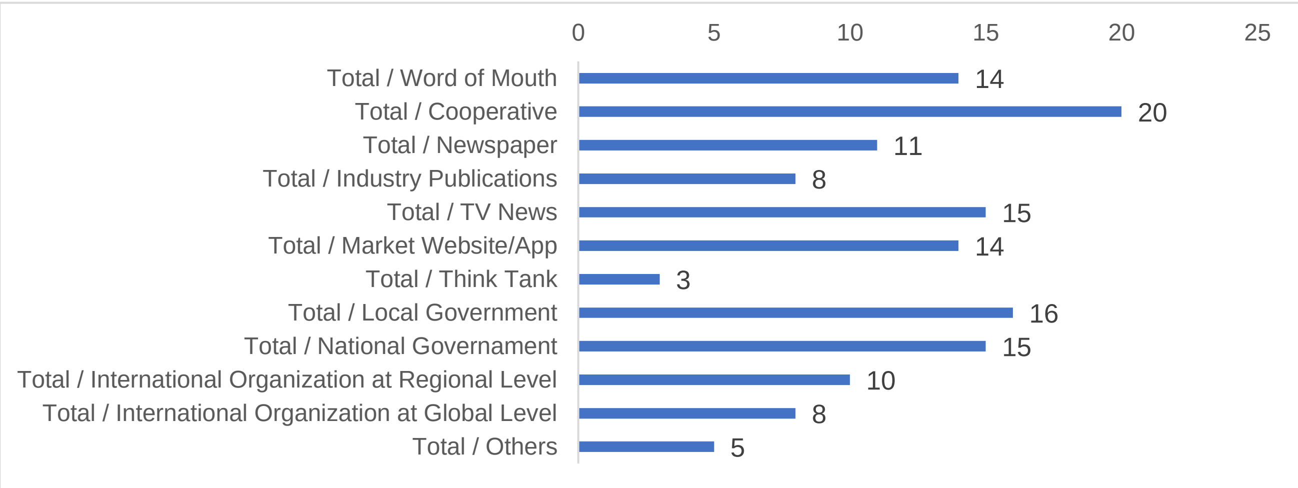
The average of the answer was 3.71. The most common response was "1" (6 respondents or 25%), and the range of answers between "1" and "3" accounted for 63%. These facts showed that the maize markets are dependent on market information more, while the rice markets are relatively less compared to maize markets.



Q6-3: Which sources of market information of maize stakeholders rely on?

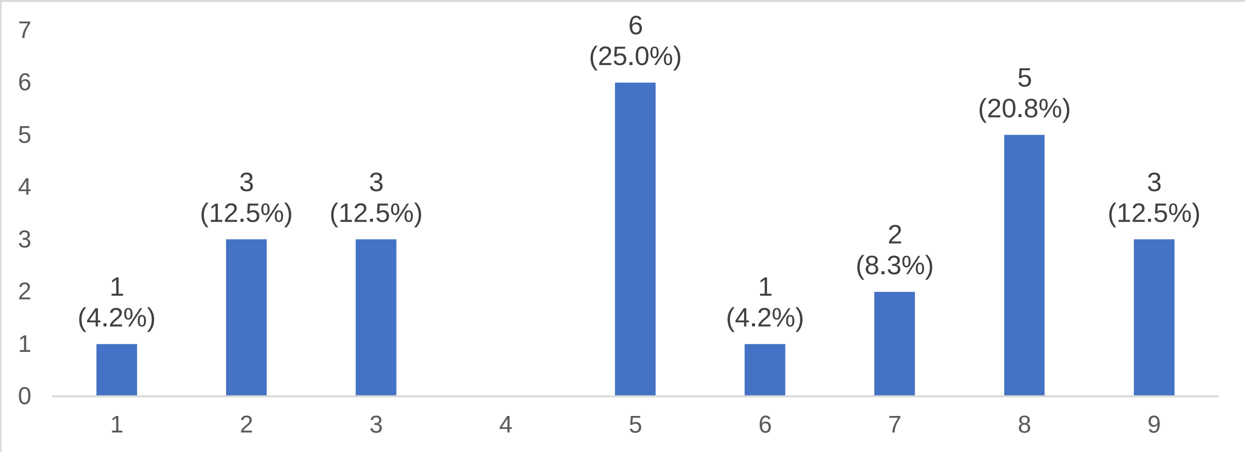
Many respondents chose "Cooperative" (20 respondents or 83%) to be their source of market information, which was followed by "Local Government" (16 or 67%), "TV News" and "National Government" (15 or 63% each), in that order. "Others" were specified as follows.

- Selected buying centers
- Template, SMS, Internal voice record
- Through websites relating to existing markets of maize to be able to do cost benefit analyses
- Field surveys data collections



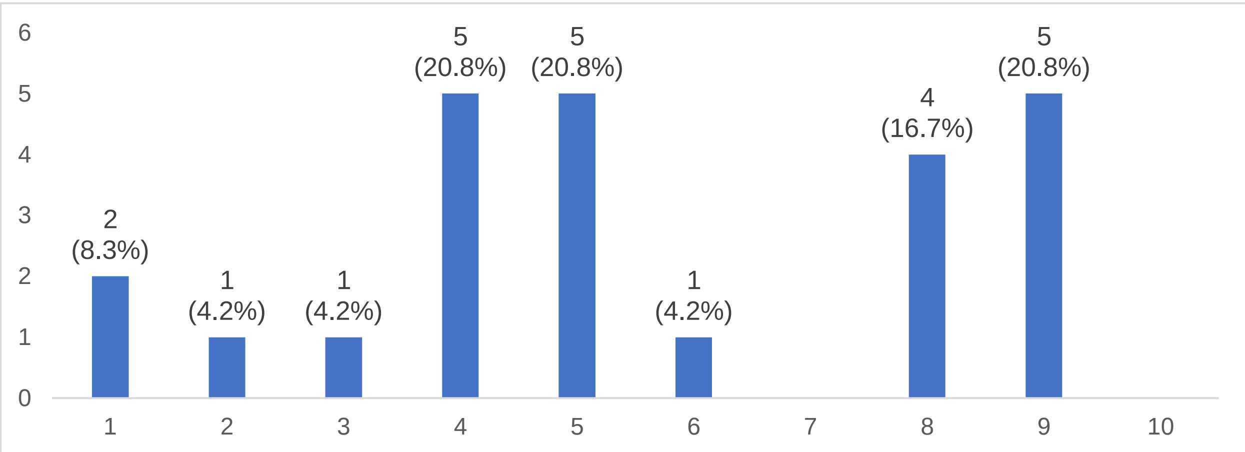
Q6-4a: How transparent the market of maize is?

The average of the answer was 5.54, and the most common response was "5" (6 respondents or 25%). The same as the result on rice, the responses were relatively scattered.



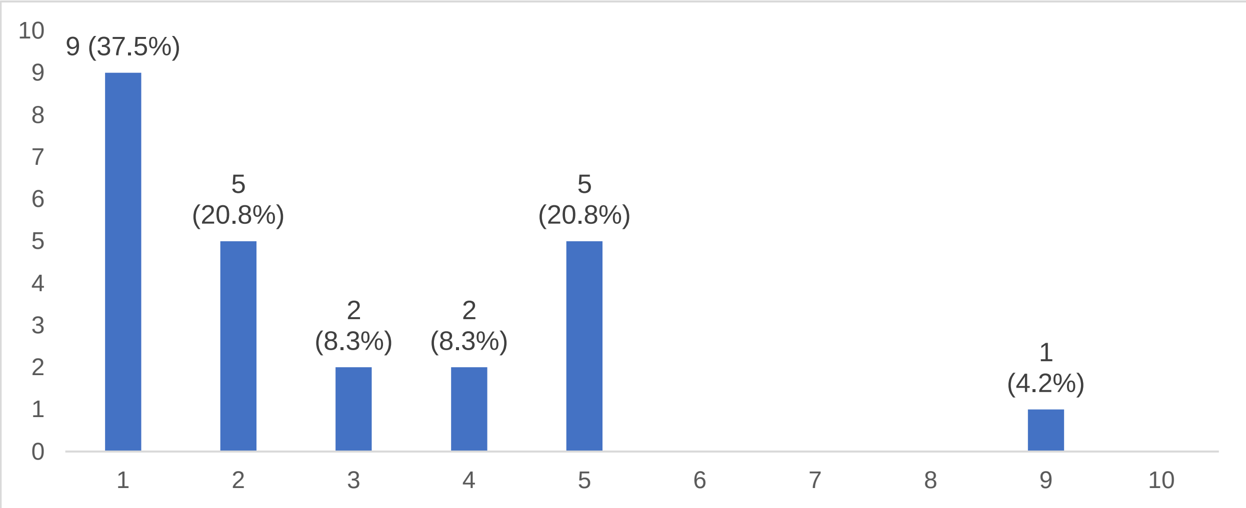
Q6-4b: Is market transparency sufficient enough to understand market conditions of maize?

The average of the answer was 5.63. The responses were divided into two poles: centering "4" / "5" (10 respondents or 42%), and "8" / "9" (9 respondents or 38%).



Q6-5: How effective are public-private partnerships and networking in the value chain of maize?

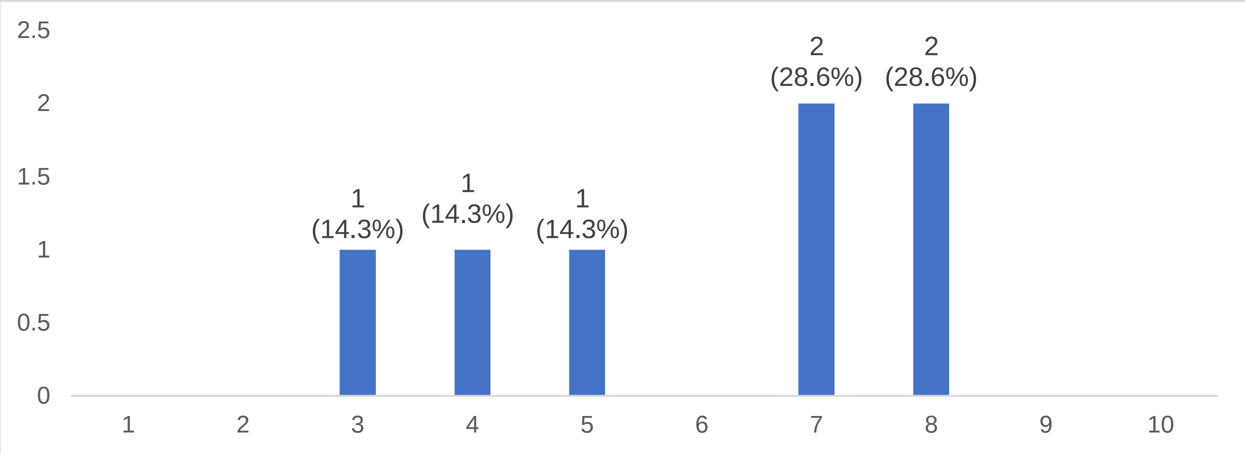
The average of the answer was 2.79, and the most common answer was "1" (9 respondents or 38%) that showed the respondents considered public-private partnerships and networking are very much useful.



iii. Wheat (7 answers)

Q2-1: Market conditions of wheat in the last 10-20 years

The average of the answers was 6.00, the lowest figure among other commodities on the same question. The respondents' answers were divided into two groups: those in the "3" to "5" range, and those in the "7" to "8" range.



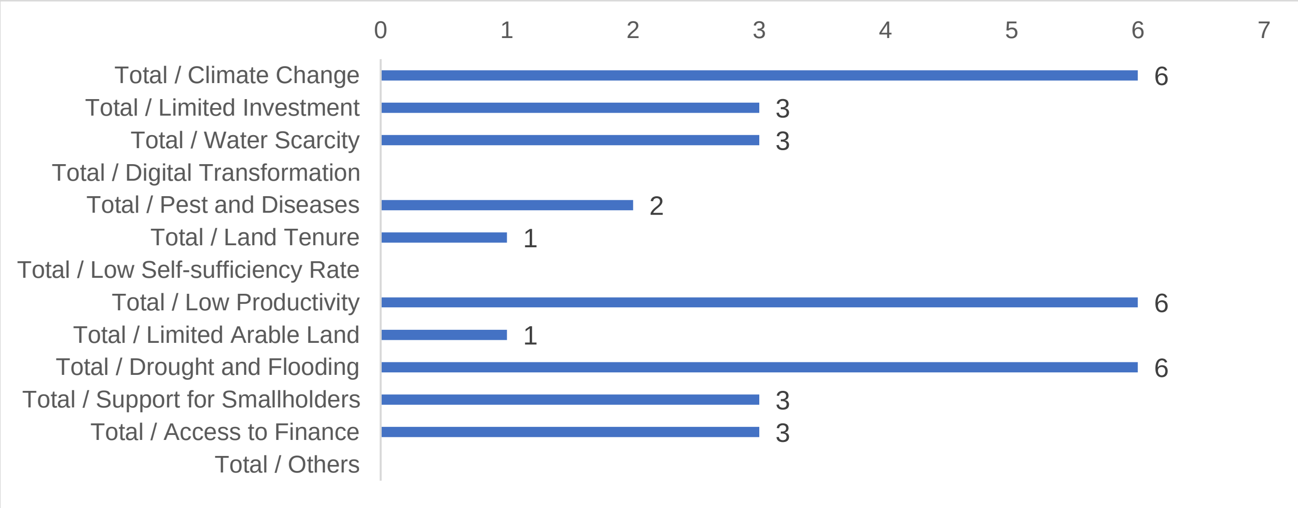
Q2-2a: Challenges in terms of inputs to wheat to address market conditions in Q2-1

The most common answer was "Price Volatility" (4 respondents or 57%) followed by "High Cost" (3 respondents or 43%). "Others" include the following.

- Subsidy is the problematic area for this product
- Sufficient and enough production able to fulfil the requirements of the country

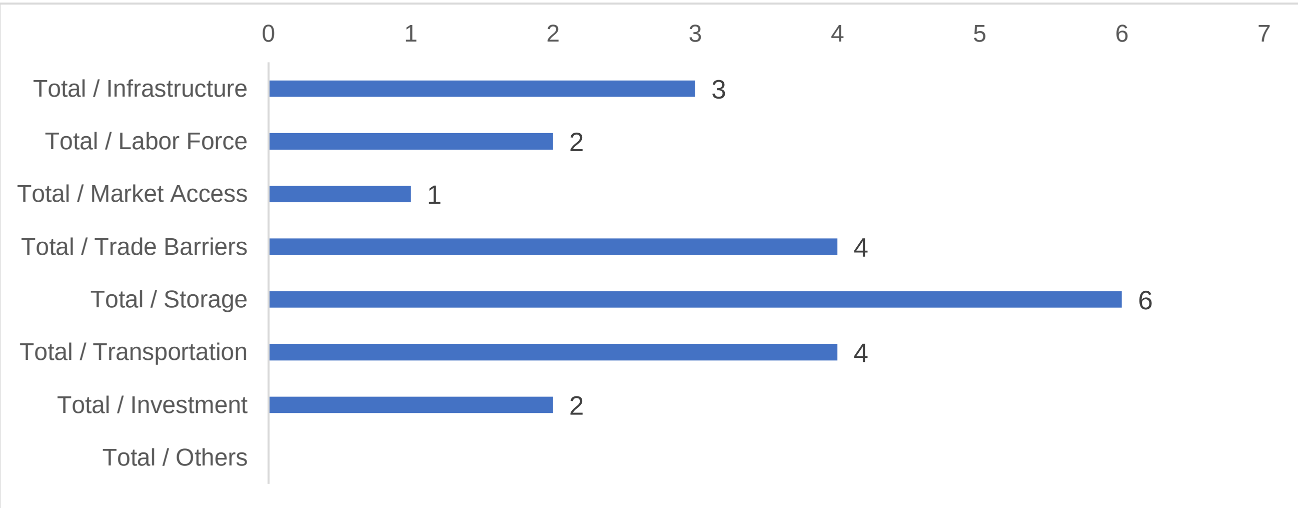
Q2-2b: Challenges in terms of production of wheat to address market conditions in Q2-1

"Climate Change", "Low Productivity" and "Drought and Flooding" were chosen by 6 respondents. Similar to the result of rice, the result shows that wheat is sensitive to climate.



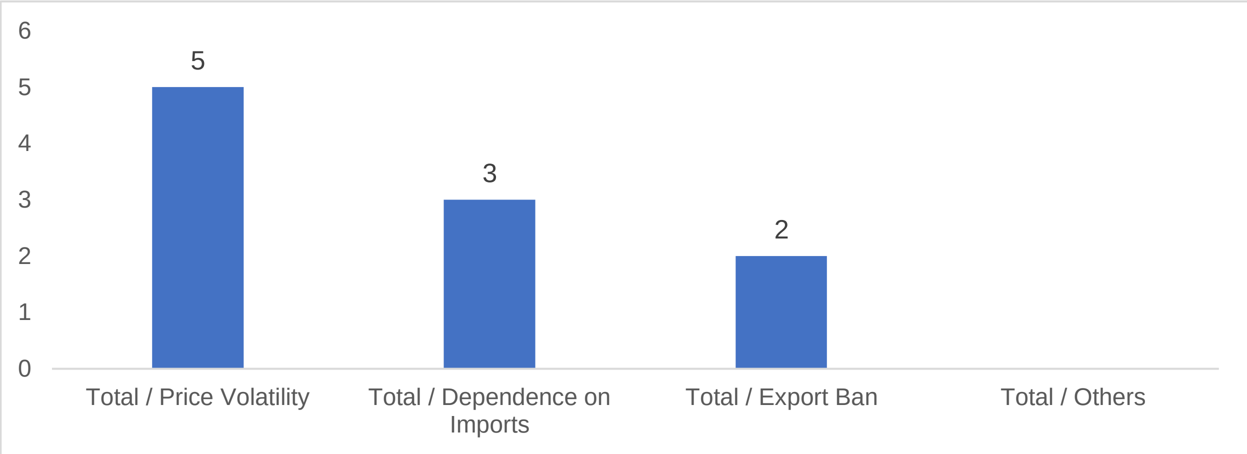
Q2-2c: Challenges in terms of processing of wheat to address market conditions in Q2-1

While "Storage" was not the most common response for rice or maize, it was the most common response for wheat (6 respondents or 86%). "Storage" was followed by "Trade Barriers" and "Transportation" (4 respondents or 57% each).



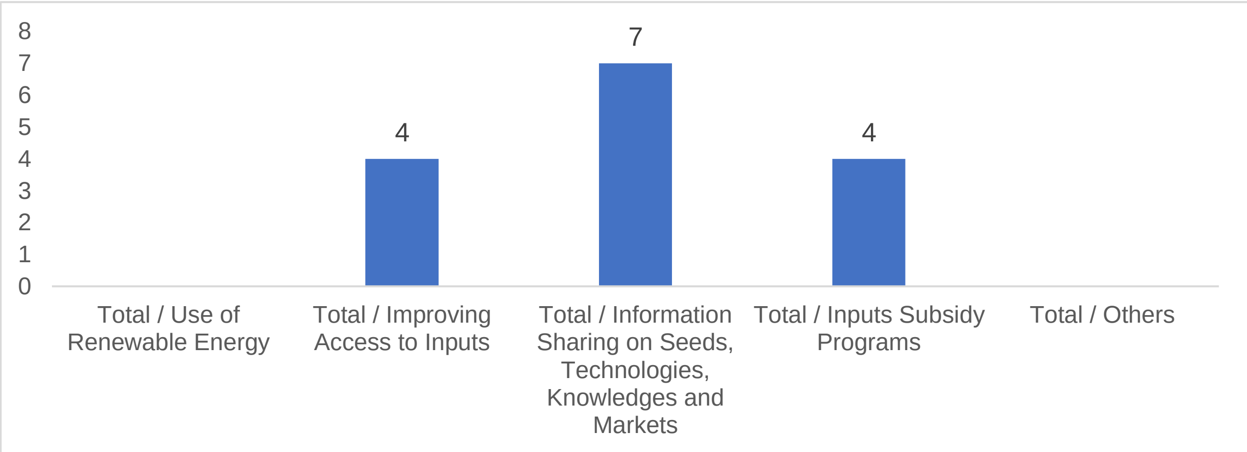
Q2-2d: Challenges in terms of consumption of wheat to address market conditions in Q2-1

Similar to the results of rice and maize, the results were “Price Volatility”, “Dependence on Imports”, and “Export Ban” in that order.



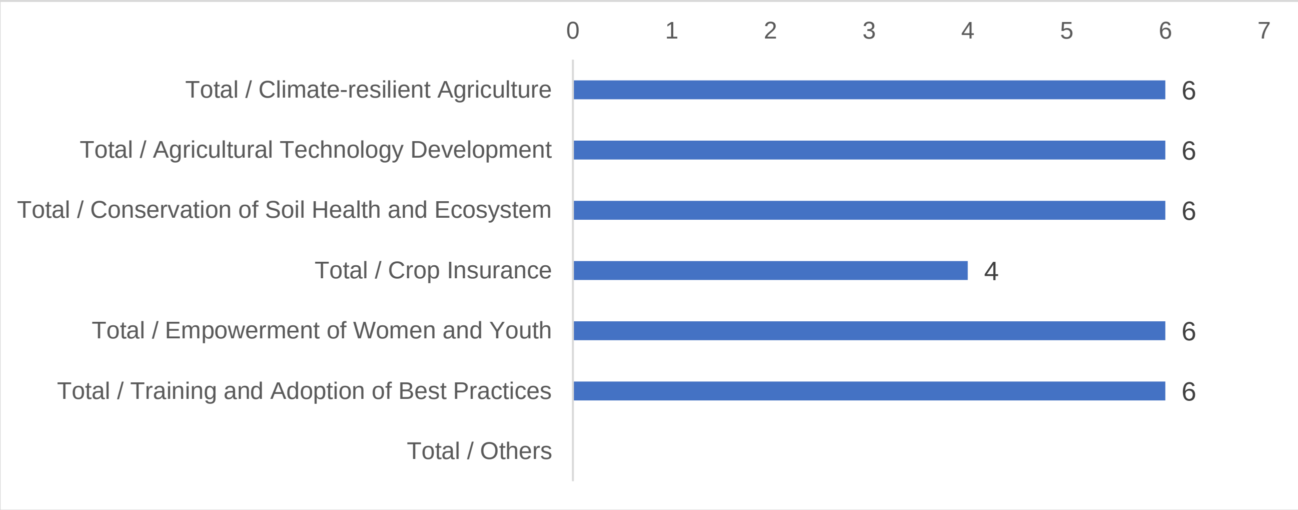
Q2-3a: Options in business regarding inputs to wheat to address the challenges in Q2-2

Similar to the results of rice and maize, the most common response was “Information Sharing on Seeds, Technologies, Knowledges and Markets”, and all respondents chose this option (7 respondents or 100%).



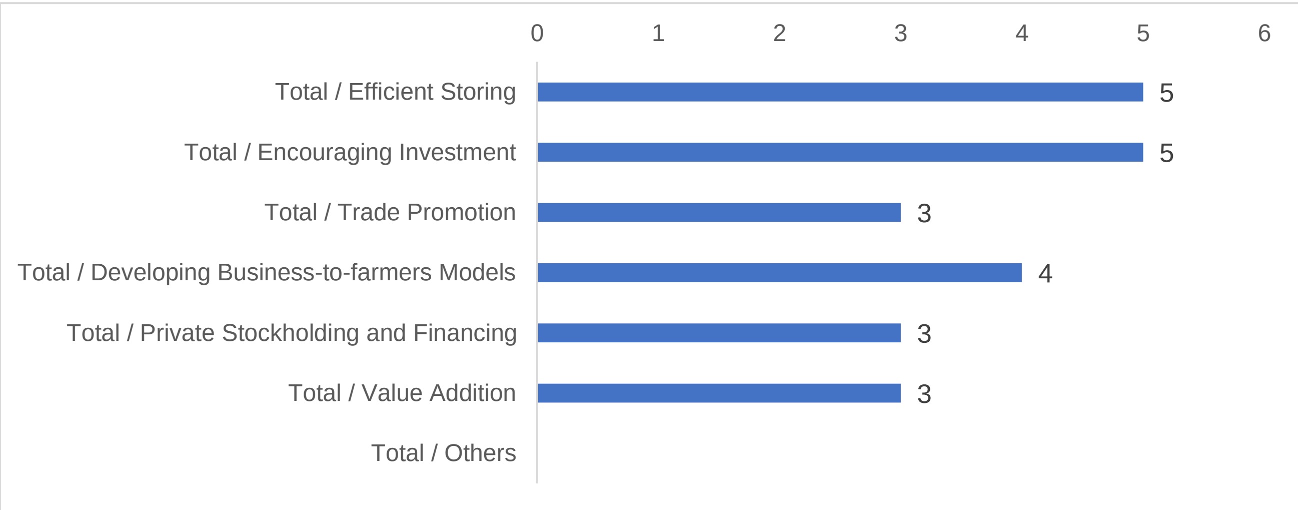
Q2-3b: Options in business regarding production of wheat to address the challenges in Q2-2

In wheat, all options are equally selected except "Crop Insurance".



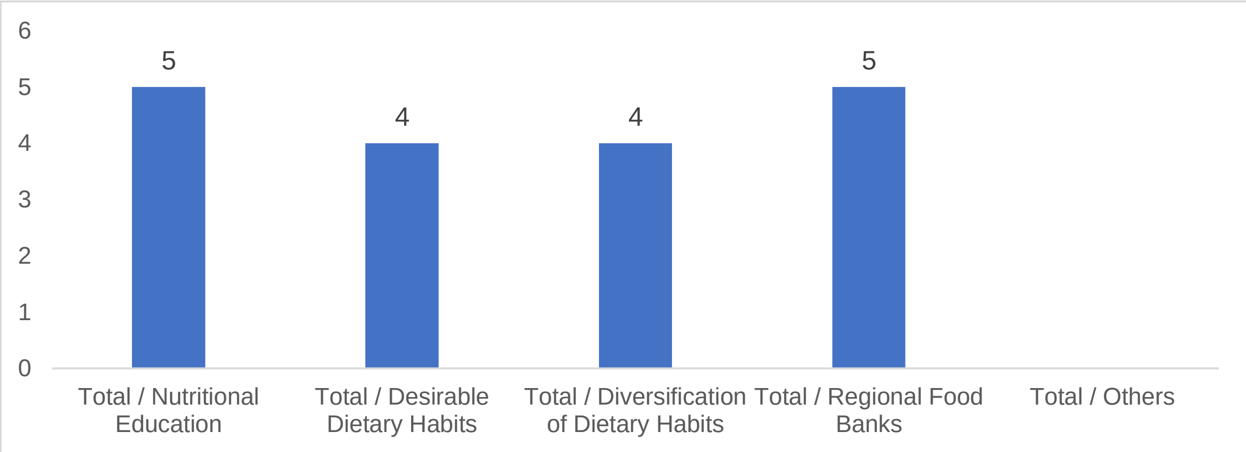
Q2-3c: Options in business regarding processing of wheat to address the challenges in Q2-2

It is remarkable that, unlike rice and maize, "Efficient Storing" and "Encouraging Investment" (5 respondents or 71% each) were selected as the most common response. As with Q2-2c (page 58) "Storage" is important for wheat.



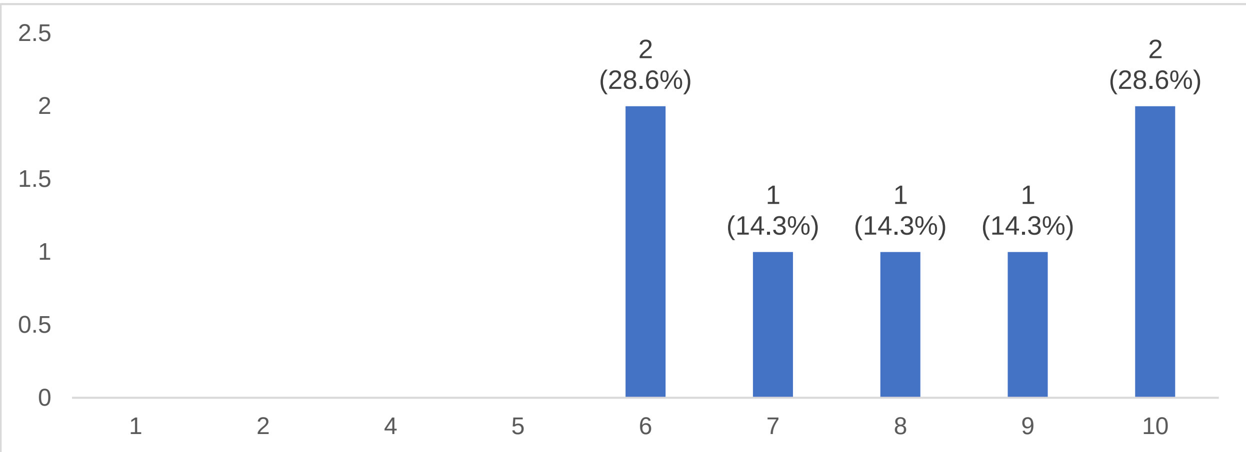
Q2-3d: Options in business regarding consumption of wheat to address the challenges in Q2-2 of wheat

Similar to the result of maize, “Nutritional Education” and “Regional Food Banks” were the most common answers (5 respondents or 71% each) but the other two options were selected almost equally.



Q3-1: General effect of climate change on wheat market

The impact of climate change on wheat was significant, with an average value of 8.00, the highest among the other commodities. However, there were two poles in the distribution of answers, namely “6” and “10” (2 respondents or 29% each).



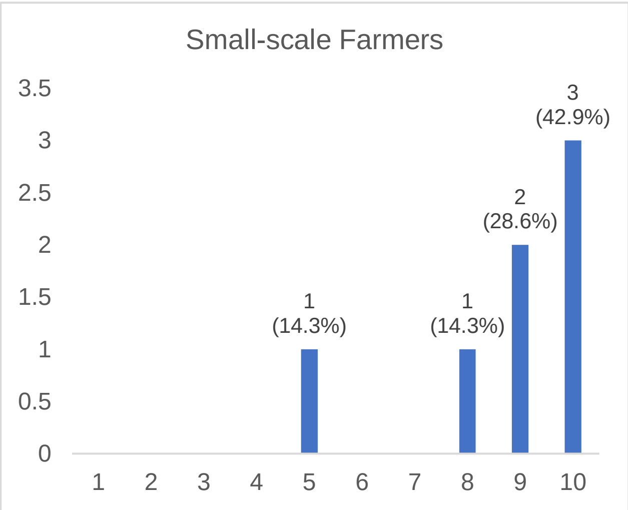
Q3-2: The extent climate change affects different players in the value chain of wheat

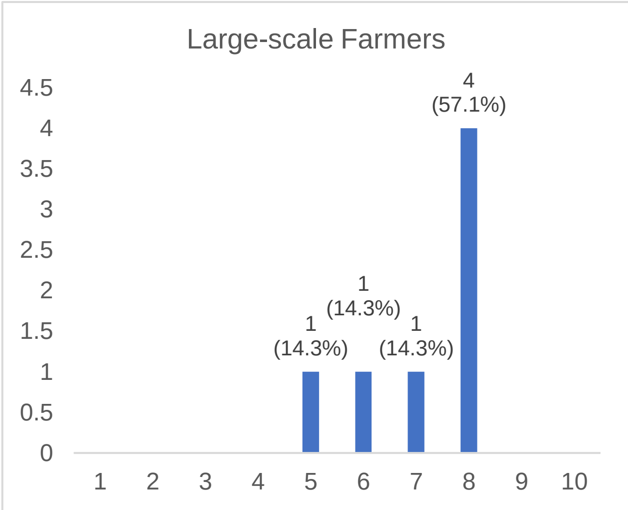
The average figure on "Small-scale Farmers" was 8.71 which was the highest figure among the four different players. The most common answer was "10" (3 respondents or 43%) followed by "9" (2 respondents or 29%). This means that "Small-scale Farmers" of wheat were more susceptible to the effects of climate change.

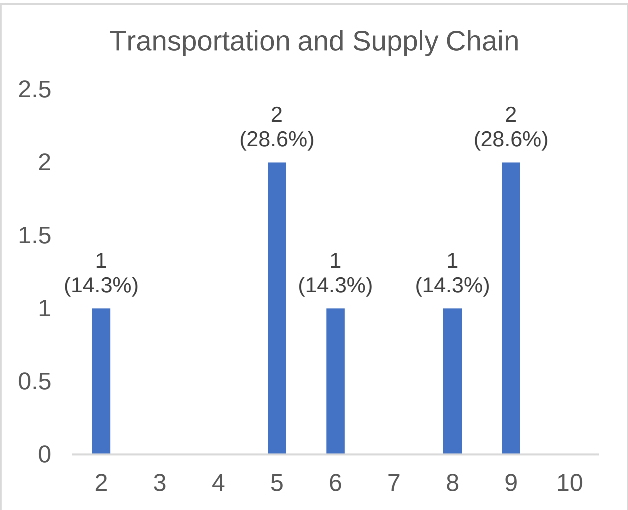
The average figure on "Large-scale Farmers" was 7.14, and the most common answers were "8" (4 respondents or 57%).

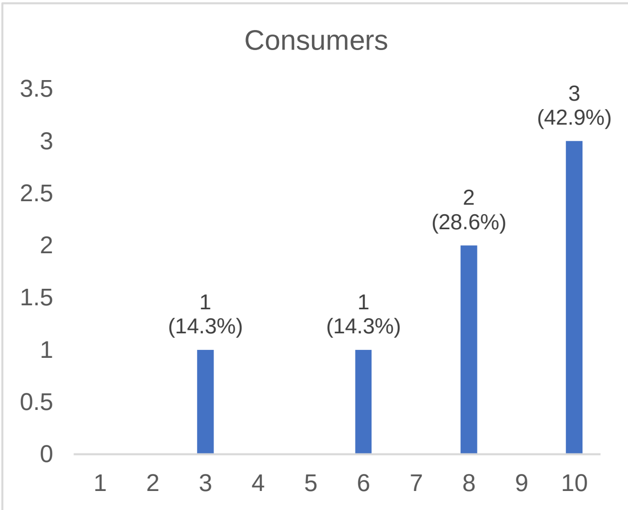
The average of the answers on "Transportation and Supply Chain" was 6.29, the lowest figure among the four different players. There were two poles in the distribution of answers, namely "5" and "9" (2 respondents or 29% each).

On "Consumers", the average was 7.86, and the most common answer was "10" (3 respondents or 43%). However, the responses can be described as spares.



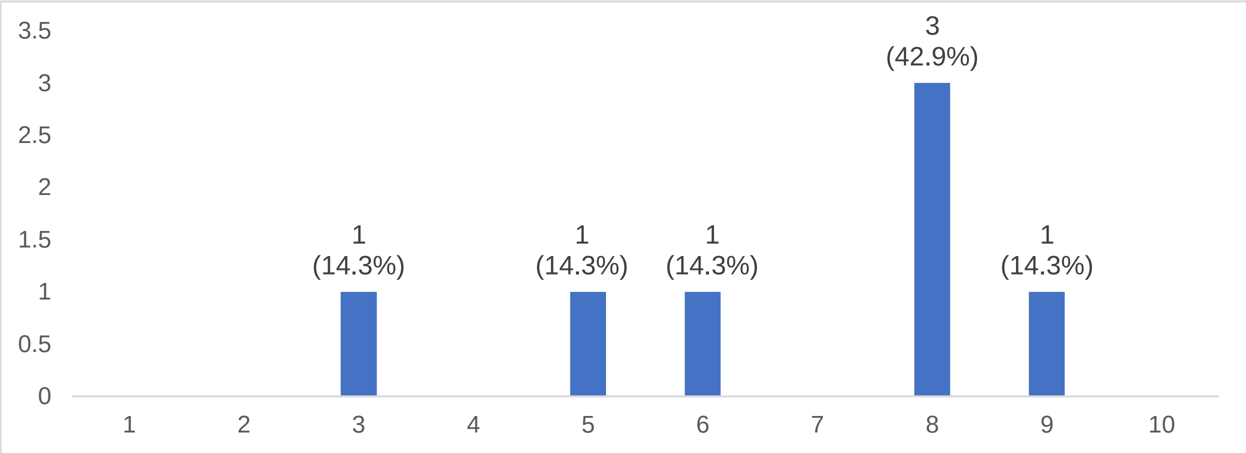






Q4-1: General effect of Covid-19 on wheat market

The average of the answers was 6.71, the lowest figure among other two commodities. The most common answer was “8” (3 respondents or 43%), however overall responses were somewhat scattered.



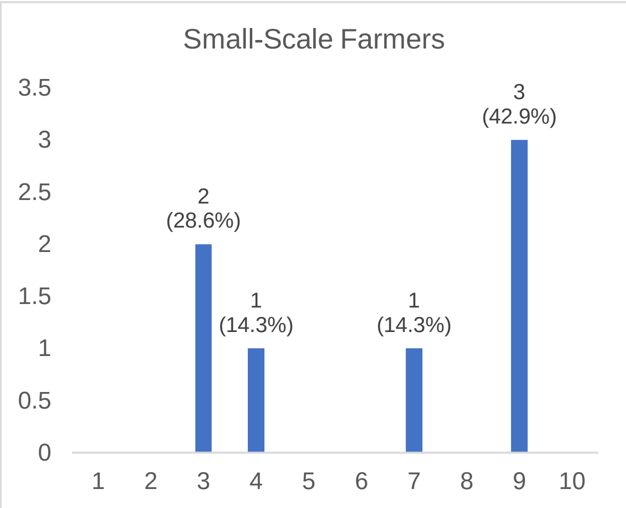
Q4-2: The extent Covid-19 affects different players in the value chain of wheat

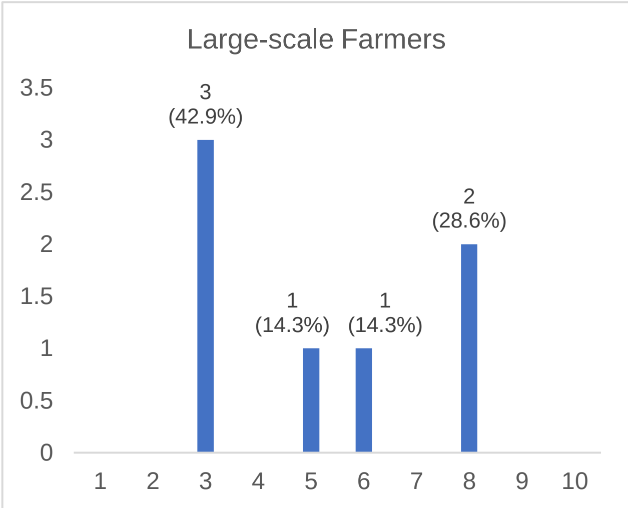
The average figure on "Small-scale Farmers" was 6.29, and the most common answer was "9" (3 respondents or 43%). From the overall results, the responses were divided between "3" and "9".

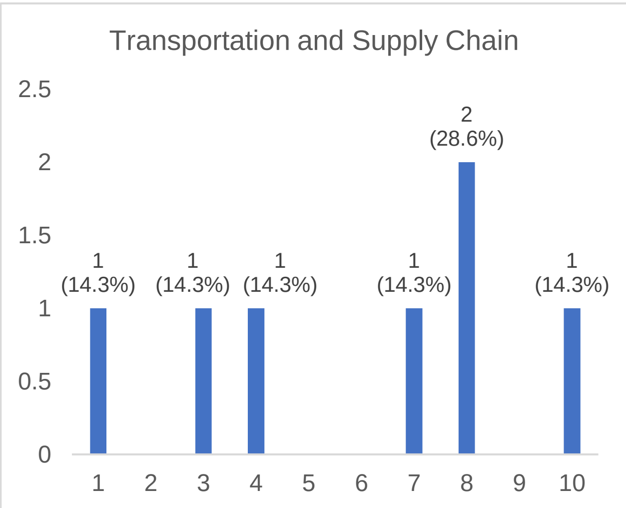
The average on "Large-scale Farmers" was 5.14, the lowest figure among other players as well as other two commodities.

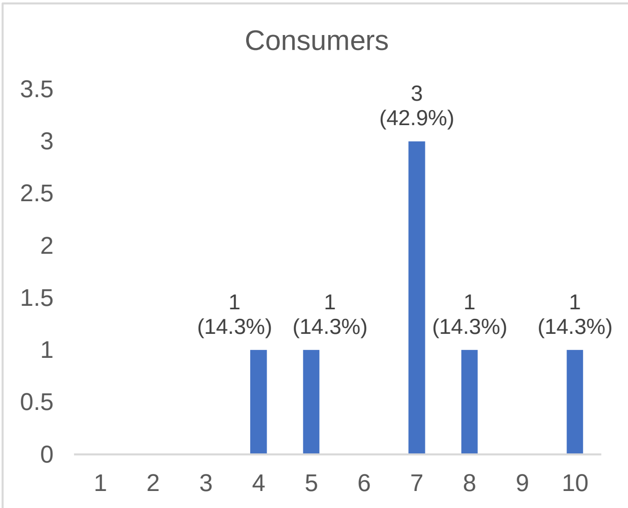
On "Transportation and Supply Chain", the average was 5.86, the lowest figure among other commodities. However, the respondents' answers were generally scattered.

The average of the answers on "Consumers" was 6.86, the highest figure among four players. And the most common answer was "7" (3 respondents or 43%).



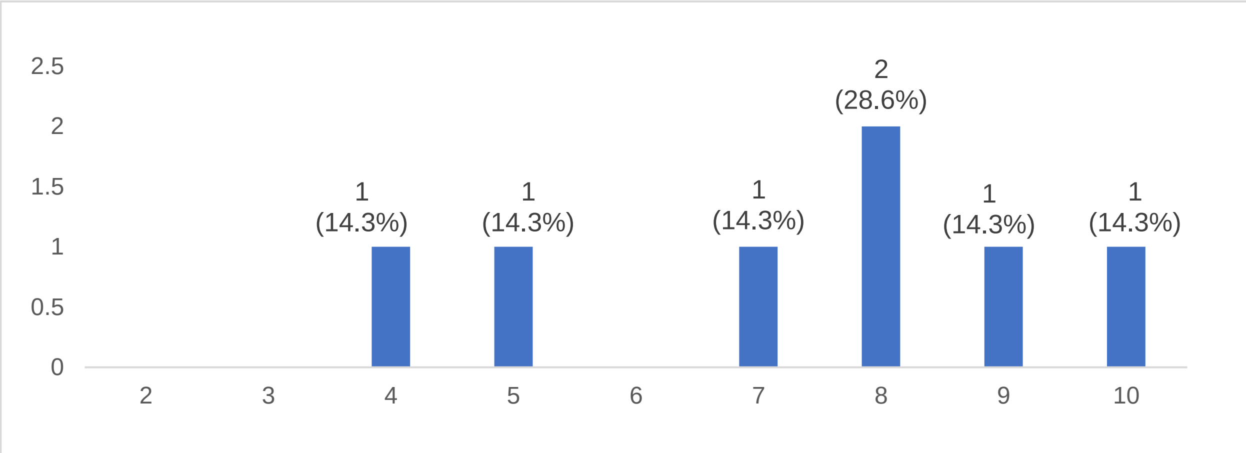






Q5-1: General effect of price-hike of wheat in 2022/23

The most common answer was “8” (2 respondents or 29%). And the average of the answer was 7.29, the lowest figure among other commodities. Different from rice and maize, the responses were generally scattered.



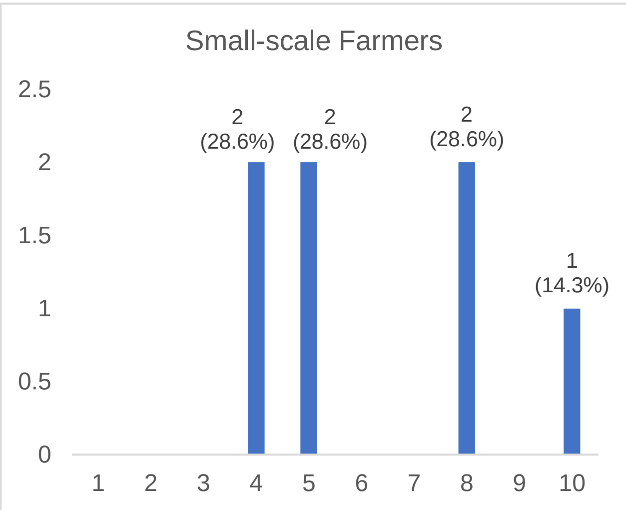
Q5-2: The extent price-hike in 2022/23 affects different players in the value chain of wheat

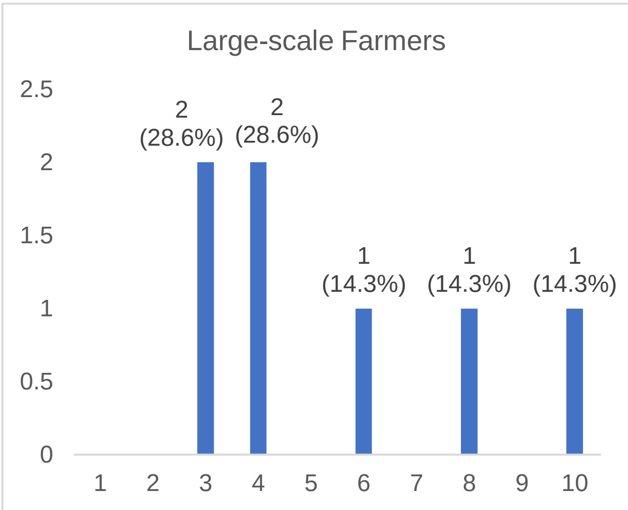
The average figure on "Small-scale Farmers" was 6.29. The most common answers were "4", "5" and "8" (2 respondents or 29% each), and the responses were scattered.

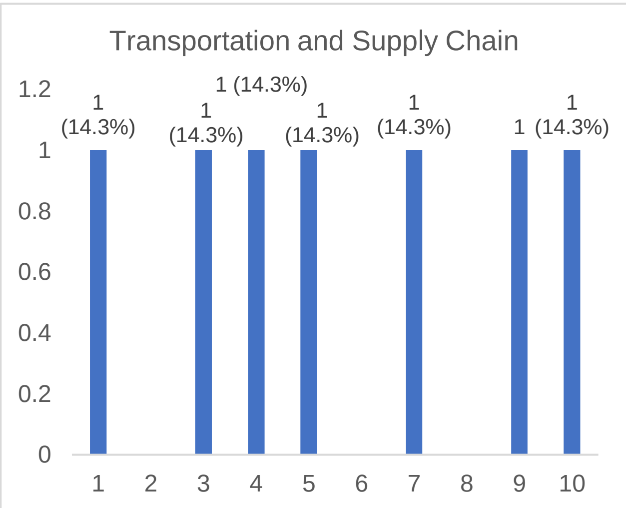
The average on "Large-scale Farmers" was 5.43, the lowest figure among other players. The responses were rather scattered, but it can be said that responses were relatively gathered in "3" and "4".

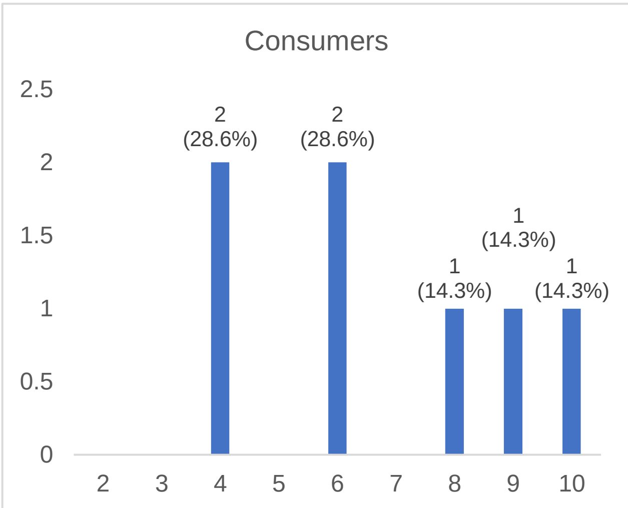
On "Transportation and Supply Chain", the average was 5.57, and responses were scattered, ranging from "1" to "10".

The average on "Consumers" was 6.71, the highest figure among other players, but the lowest among other two commodities.





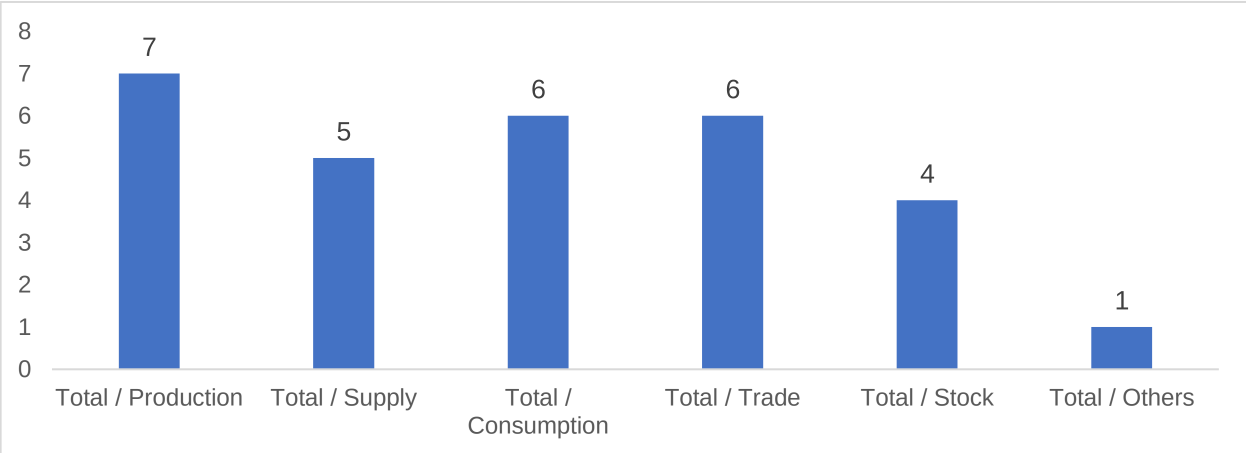




Q6-1a: Which type of market information regarding wheat stakeholders are dependent?

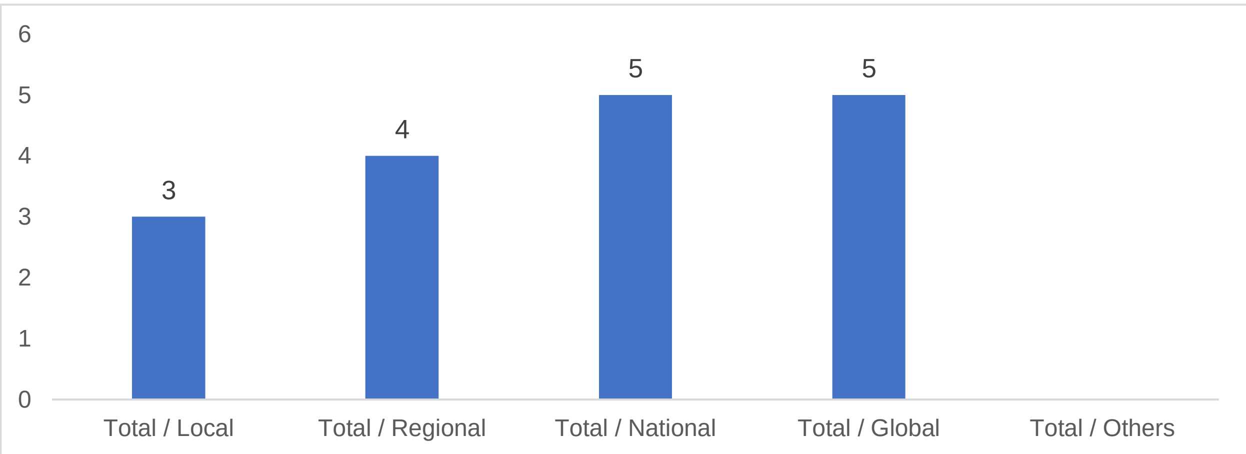
The most common answers were "Production" (7 respondents or 100%), followed by "Consumption" and "Trade" (6 respondents or 86% each). The following was specified as the answer "Others".

- Price



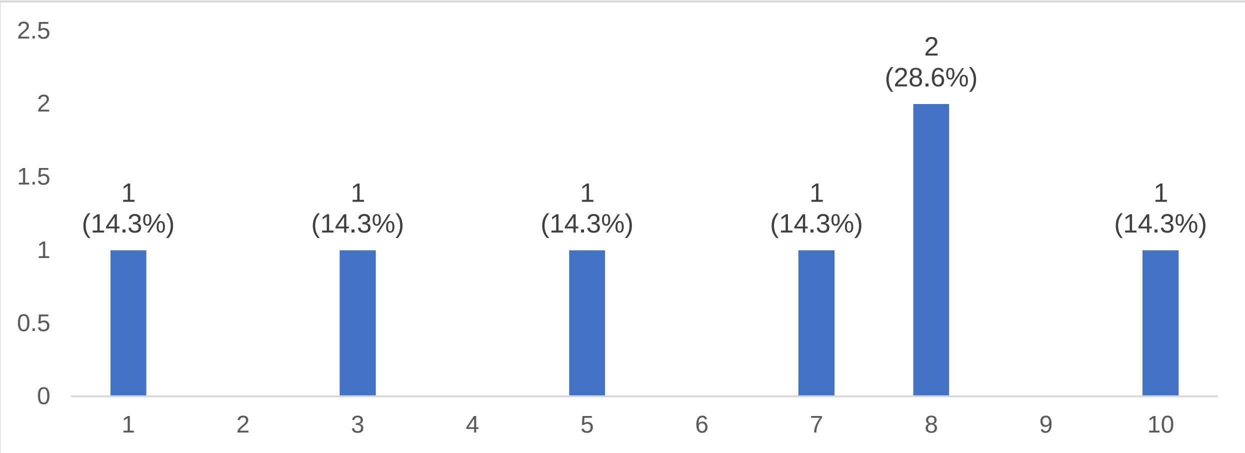
Q6-1b: Which level of market information regarding wheat stakeholders are dependent?

It should be noted here that "Global" was the most common response, which was not the case for the other two commodities. The most common answers were "National" and "Global" (5 respondents or 42% each).



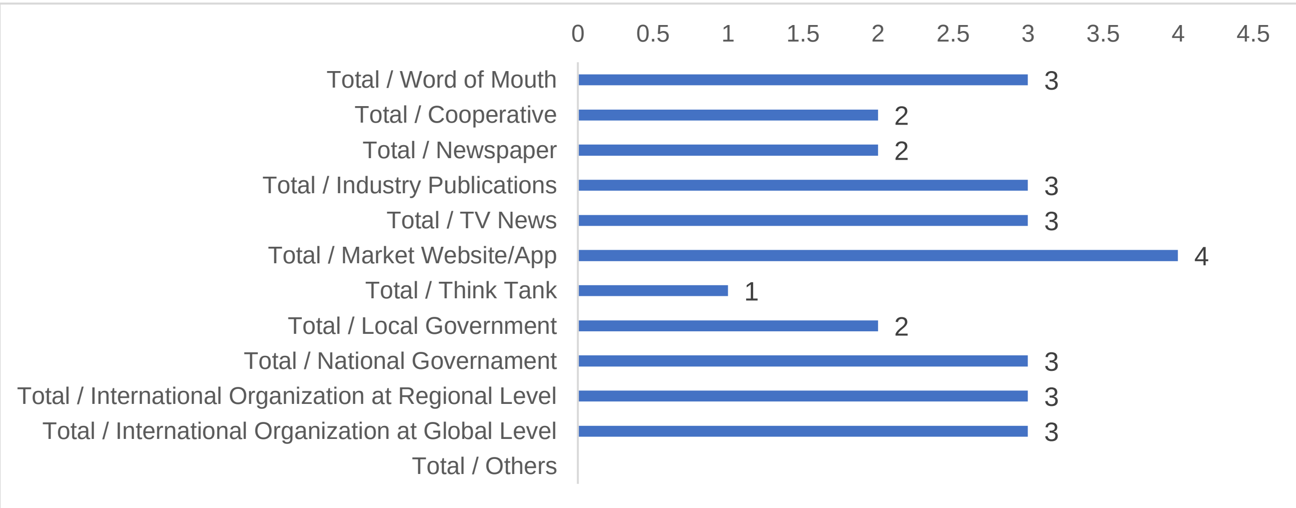
Q6-2: How much stakeholders rely on market information of wheat?

The average of the answers was 6.00, and the most common answer was “8” (2 respondents or 29%). The responses were generally scattered between “1” and “10”.



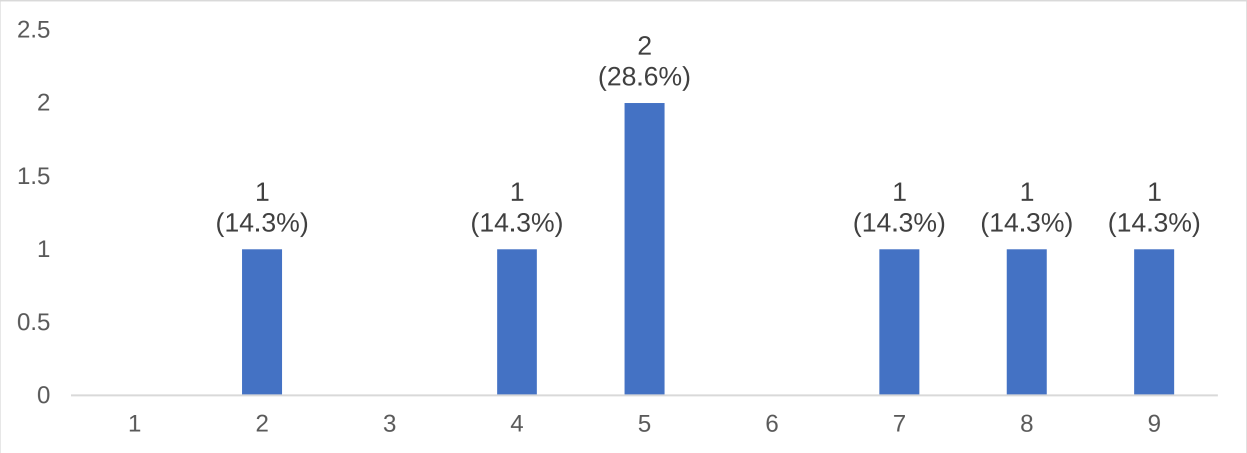
Q6-3: Which sources of market information of wheat stakeholders rely on?

Many respondents chose “Market Website/App” (4 respondents or 57%). On the other hand, “Cooperative”, which was the most common response for rice and maize, was selected by relatively few respondents for wheat.



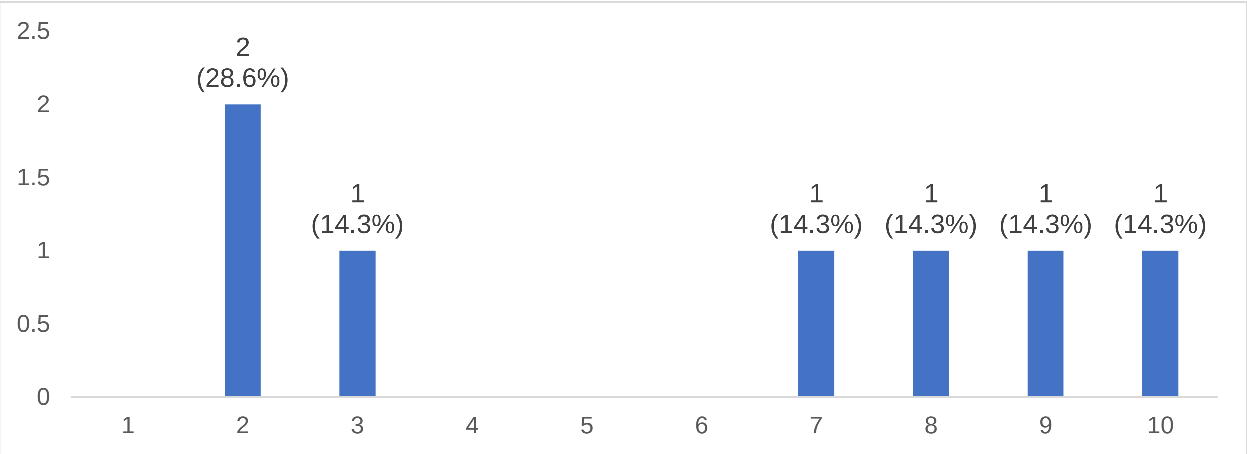
Q6-4a: How transparent the market of wheat is?

The average of the answer was 7.00, the highest figure among other two commodities. But similar to other commodities, the most common answer was “5” (2 respondents or 29%) and the responses were scattered.



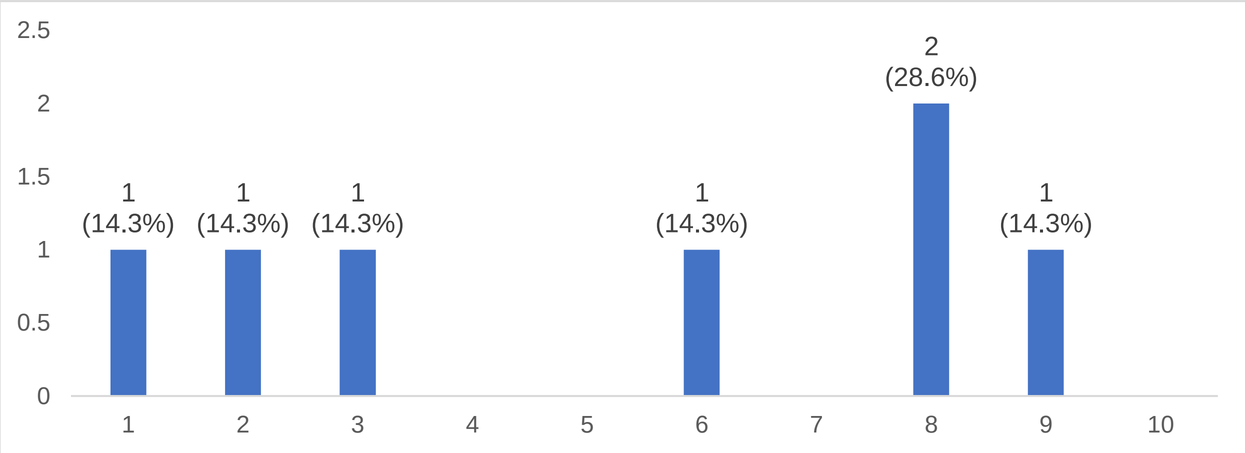
Q6-4b: Is market transparency sufficient enough to understand market conditions of wheat?

The average of the answer was 7.00, and the result was divided into two groups: the range of “2” to “3”, and the range of “7” to “10”.



Q6-5: How effective are public-private partnerships and networking in the value chain of wheat?

The average of the answers was 5.29. However, the result was scattered and divided into two groups: the range of “1” to “3”, and the range of “6” to “9”.



iv. Barley and Rapeseed/Canola (1 answer each)

Q2-1: Market conditions in the last 10-20 years

Barley: “8”

Rapeseed/Canola: “4”

Q2-2a: Challenges in terms of inputs to address market conditions in Q2-1

Barley: “Price Volatility”

Rapeseed/Canola: “High Cost”
“Price Volatility”

Q2-2b: Challenges in terms of production to address market conditions in Q2-1

Barley: “Climate Change”
“Limited Arable Land”
“Water Scarcity”
“Land Tenure”
“Limited Investment”
“Drought and Flooding”
“Access to Finance”

Rapeseed/Canola: “Climate Change”
“Digital Transformation”
“Low Productivity”
“Access to Finance”

Q2-2c: Challenges in terms of processing to address market conditions in Q2-1

Barley: “Infrastructure”
“Market Access”
“Trade Barriers”
“Storage”, “Investment”

Rapeseed/Canola: “Labor Force”
“Investment”

Q2-2d: Challenges in terms of consumption to address market conditions in Q2-1

Barley: “Price Volatility”
“Export Ban”

Rapeseed/Canola: “Price Volatility”
“Dependence on Imports”

"Export Ban"

Q2-3a: Options in business regarding inputs to address the challenges in Q2-2

Barley: "Improving Access to Inputs"
"Information Sharing on Seeds, Technologies, Knowledges and Markets"
Rapeseed/Canola: "Use of Renewable Energy"
"Information Sharing on Seeds, Technologies, Knowledges and Markets"
"Inputs Subsidy Programs"

Q2-3b: Options in business regarding production to address the challenges in Q2-2

Barley: "Climate-resilient Agriculture"
"Conservation of Soil Health and Ecosystem"
"Crop Insurance"
"Empowerment of Women and Youth"
"Training and Adoption of Best Practices"
Rapeseed/Canola: "Climate-resilient Agriculture"
"Agricultural Technology Development"
"Empowerment of Women and Youth"

Q2-3c: Options in business regarding processing to address the challenges in Q2-2

Barley: "Efficient Storing"
"Trade Promotion"
"Developing Business-to-farmers Models"
"Private Stockholding and Financing"
"Value Addition"
Rapeseed/Canola: "Developing Business-to-farmers Models"

Q2-3d: Options in business regarding consumption to address the challenges in Q2-2

Barley: "Nutritional Education"
"Desirable Dietary Habits"
"Regional Food Banks"
Rapeseed/Canola: "Diversification of Dietary Habits"

Q3-1: General effect of climate change on market

Barley: "9"
Rapeseed/Canola: "8"

Q3-2: The extent climate change affects different players in the value chain

Barley: (Small-scale Farmers) ”8”
(Large-scale Farmers) ”4”
(Transportation and Supply Chain) ”8”
(Consumers) ”8”

Rapeseed/Canola: (Small-scale Farmers) ”8”
(Large-scale Farmers) ”5”
(Transportation and Supply Chain) ”8”
(Consumers) ”8”

Q4-1: General effect of Covid-19 on market

Barley: “7”
Rapeseed/Canola: “5”

Q4-2: The extent Covid-19 affects different players in the value chain

Barley: (Small-scale Farmers) ”8”
(Large-scale Farmers) ”5”
(Transportation and Supply Chain) ”8”
(Consumers) ”8”

Rapeseed/Canola: (Small-scale Farmers) ”5”
(Large-scale Farmers) ”5”
(Transportation and Supply Chain) ”5”
(Consumers) ”7”

Q5-1: General effect of price-hike in 2022/23 on market

Barley: “9”
Rapeseed/Canola: “8”

Q5-2: The extent price-hike in 2022/23 affects different players in the value chain

Barley: (Small-scale Farmers)”8”
(Large-scale Farmers)”7”
(Transportation and Supply Chain)”8”
(Consumers)”8”

Rapeseed/Canola: (Small-scale Farmers)”3”
(Large-scale Farmers)”3”
(Transportation and Supply Chain)”5”
(Consumers)”5”

Q6-1a: Which type of market information stakeholders are dependent?

Barley: "Production"
"Supply"
"Trade"

Rapeseed/Canola: "Production"
"Consumption"
"Trade"

Q6-1b: Which level of market information stakeholders are dependent?

Barley: "Local"
"Regional"
"National"

Rapeseed/Canola: "Local"
"Regional"
"Global"

Q6-2: How much stakeholders rely on market information?

Barley: "8"

Rapeseed/Canola: "6"

Q6-3: Which sources of market information stakeholders rely on?

Barley: "Word of Mouth"
"Cooperative"
"TV News"
"Local Government"

Rapeseed/Canola: "Cooperative"
"Industry Publications"
"International Organization at Global Level"

Q6-4a: How transparent the market is?

Barley: "7"

Rapeseed/Canola: "6"

Q6-4b: Is market transparency sufficient enough to understand market conditions?

Barley: "7"

Rapeseed/Canola: "5"

Q6-5: How effective are public-private partnerships and networking in the value chain?

Barley: “9”

Rapeseed/Canola: “2”

3. Analysis of the descriptive questions

1) Rice

Q8: Based on the "Forecast Global Supply and Demand for Grain 2023/24", what are the similarities and differences in the current market conditions for rice?

For most of the economies in Asia where rice is the basic foodstuff, self-sufficiency policy is adopted regardless they are exporting or importing countries. Climate change, Covid-19, price-hikes for agricultural inputs and energies and export ban/restriction have negatively affected production, trade and prices. Subsidies are another concern for developing economies. In a country in Africa, even the domestic production is growing, it cannot catch up the growing demand of rice and the import is also increasing. In a country in Oceania, the consumption of rice, together with pasta, is growing because of the evolving preference of consumers in urban areas. Specific answers by the respondents could be summarized as follows;

	Sub-Region Type of Org	Descriptions
R1	Southeast Asia Consumers' Coop	- Because of some traders in our locality, our products are in low price.
R3	Southeast Asia Umb of Coops	- Farmers face problems due to climate change and Covid-19 has added more pressure to these problems. - Global inflation caused higher costs for agricultural inputs and fuel, while the prices of agricultural products are low. - Rice demand has increased from 5 MT to 7MT and will increase more in the coming years. Farm gate prices are still low compared to those in other countries in the region that keeps smallholders unprofitable.
R4	South Asia Umb of Coops	- The country aims to secure food self-sufficiency including for processing, seeds and husbandries. - The export of rice is at a high peak now and the new markets in Africa will emerge in the coming months. The country should make use of import orders at high price in the coming months before the price will be down. - Considering the effects of climate change, the rice production in the rest of the year is not "abundant" as was the case in the beginning of 2023.

		- The price in the world may not increase and may even decrease because Russia promotes export of grains.
R5	South Asia Ag Organization	- Because of the current export restriction in the neighboring country, local production is likely to increase to make up for the import gap. - As internal competition and inventory stockpiling would be mean, prices could remain in the same range and consumption might not decline in the near future. - Factors such as delayed rainfall might affect the harvesting season in the western half of the county which might give rise to an increase in prices for a market totally dependent on the local production. - Changes in prices in the future are likely driven by factors such as fuel prices, local production levels, shift in preference to parboiled/basmati rice.
R7	Southeast Asia Umb of Coops	- The rice price is largely determined by the cartel mafia in their harvest due to complex problems, from limited land, access to capital and other inputs such as seeds. - Many farmers are not the target of subsidized fertilizers and they still have to pay market prices which are often more expensive. This is not always caused by the limited supply, but by moral hazard. - Small farmers are disadvantaged, and their institutions are very weak. Cooperatives in the field have not been effective in helping them.
R8	South Asia Umb of Coops	- Both production and consumption of rice are increasing in the country. - In FY2022/23, production has increased by 6.94% to 5.486 million tons on paddy (unhulled) basis, equivalent to 3.52 million tons on milled basis. However, the planted area of rice was decreased by 2% in FY2022/23. - According to the Government, the requirement of rice is around 4 million tons on milled basis, thus there is a shortage of 480,000 tons. - Due to the imposition of a ban on Indian white rice exports, the price rate has been increased.
R9	South Asia Ag Organization	- Rice production in the last two years declined due to drought, flood and diseases. Since the country is not fully dependent on import, the white rice ban in India did not affect us so much. - Consumer price of rice increased to an unexpected level. - Decline in production and the lack of government control are the reasons of the price hike.

		- Due to the lack of proper storage facilities in the government institutions, the private sector has become stronger.
R10	West Africa Umb of Coops	- Rice production has increased significantly over the years due to the high demand for local consumption. - Producers are unable to meet the market demand, and as a result, there is a hike in the importation of the commodity. - Most consumers prefer the imported rice to the locally produced rice with respect to the quality, which can be attributed to the types of rice mills and the drying systems adopted by the local farmers.
R11	South Asia Umb of Coops	- The Government encourages farmers to increase cultivation to fulfill the local requirement. - Normally, we import rice from India, Pakistan, and Thailand. - There are some traditional varieties of rice, but their production is low and the price is high.
R12	Africa Think-tank/Gov	- The total output of rice production in the country is not able to meet the rising demand, which led to increased importation of rice and rice has become one of the major components of import bill. - The Government implemented the local product consumption strategy including of rice. This enabled local producers to gain substantial market, but they are not able to compete with imported rice in terms of cost. - The sharp rise in the price of imported rice has been observed in times of the Covid-19 period and under the Russia-Ukraine war. The external influence will continue to bear an increase in rice price be it locally produced or imported.
R13	Southeast Asia Umb of Coops	- Energy markets are experiencing unprecedented price developments due to the conflict in Ukraine. In such turbulence, the country continues to ensure the stability of trade of grains and energy. - Regulated exchanges operating the wholesale of grain products and energy markets provide essential transparency on prices on the physical underlying of crop and energy supply and demand. - A robust and transparent price formation process, combined with sound policies to ensure an orderly market, is essential under any market circumstances especially when markets are moving.
R14	East Asia Ag Organization	- According to the Government, the rice planting area has declined but the rice self-sufficiency rate as high as 95%-100% and the inventory is

		in good level. Therefore, the impact of the current situation is expected to be minimal.
R15	Southeast Asia Ag Organization	- It is important to hear from the people regarding the products.
R16	Oceania Think-tank/Gov	- The rice market in the country was equal to 33.00 million USD (in retail prices) in 2015. Until 2025, the rice market is forecast to be 26.52 million USD (in retail prices), 1.77% reduction of CAGR per year for 2020-2024. - The annual average per capita consumption in value was 4.20 USD (in retail prices) in 2015. During 2016 - 2020, it declined for 4.52% per year. During 2021 - 2025, it is forecast to slow down its decline for 3.69% CAGR per year. - The pasta and rice are going through a period of major shifts in consumer preferences. Consumers' evolving choice has influenced pasta and rice production and consumption at all stages of the value chain.
R17	Southeast Asia Ag Organization	- As the population grows, agricultural land areas are being converted to residential areas in response to housing needs, which led to a decrease in the amount of land available for rice cultivation. - As a result, demand for rice remains high, but there is not enough supply to meet it. This situation is becoming worse as farmers are unable to rely on environmental conditions due to climate change. - It is believed that this issue may also affect other commodities in the future.
R18	Southeast Asia Ag Organization	- Agricultural production is facing higher costs due to the inflation at 40% caused by the fact that almost all materials are imported from abroad. - As a result, the price of rice has increased by about 50%, which has had a significant impact on the livelihoods of people in the country.
R19	South Asia Umb of Coops	- There are notable differences that could affect the market. Price volatility remains a challenge, influenced by factors like weather conditions, government policies, and shifting demand. - Technological advancements and changing farming practices may impact production levels and quality. Evolving consumer dietary trends may drive a preference for organic or specialty rice varieties. - Government policies, subsidies, and trade regulations are subject to change and can significantly affect the market dynamics. - Supply chain disruptions, exemplified by events like the Covid-19

		pandemic, may have unique repercussions on rice production and distribution in 2023-24.
R20	East Asia Umb of Coops	- The influence of global supply and demand is limited in relation to domestic supply and demand situation and prices. - The Government currently promotes exports of agricultural and livestock products including rice. It is imperative to take account of the international grains' supply and demand situation, particularly in terms of prices.
R21	Southeast Asia Ag Organization	- Production of rice is in favorable conditions. The production plan of over 43 million tons can be completed and the needs for food security, processing, and consumption can be guaranteed and certain amount is can be exported. - In the long term, rice export businesses need to cooperate between farmers and cooperatives to meet the demand for raw material areas, ensure stable quality, quantity and price. - Nobody knows the short-term or long-term effect of India's ban on rice export. It is risky too. We need to address production plans and monitor the market.

Q9: Which kind of market price information do you collect and use as reference price for rice?

Many respondents answered they collected and used cash price, market price and especially government support price among others as reference prices for rice. They are also cautious of the currency fluctuations. Only a few answered they used international price. It was observed those who belonged to the association or the company at local level tended to depend on the information obtained with word of mouth. It was also observed in countries close to the large rice producing countries, their market price was affected by trade policies such as export bans or quotas introduced by the neighboring countries. Specific answers by the respondents could be summarized as follows;

	Sub-Region Type of Org	Descriptions
R1	Southeast Asia Consumers' Coop	- Price information is based upon the mandated price ceiling.
R3	Southeast Asia Umb of Coops	- Farmers' organizations and big companies contract agreement in advance for special variety like fragrant rice at government purchase price. Farmers have to follow the required standards.
R4	Southeast Asia Umb of Coops	- Able to collect market information through the governmental trade promotion offices abroad to connect exporters and importers, and get forecast of import needs, etc.
R5	South Asia Ag Organization	- Word of mouth is the most commonly used price regulator in local market. - Even though there is a government support price, it is not implemented effectively because of unregulated billing and lack of storage.
R6	South Asia Food Company	- We use the government support price as a reference price. We carry out our own survey on the cost of production at farm level and pay this price to rice farmers based before seeding, which is 10-15% higher than the government support price.
R7	Southeast Asia Umb of Coops	- The highest price for retailer from government policy, import quota from the Government, national and regional price and inflation
R8	South Asia Umb of Coops	- Government support price: determined every year since 2012. - Market place: open markets are available. - Cash price: the vendors and coops pay cash price to farmers. Consignment agreement is practiced by private companies.

		- Future price: not assumed. - Regional price: concept has not been developed.
R9	South Asia Ag Organization	- The government support price is useful and is passed on to farmers and consumers via the media. - Fluctuation of foreign currency affect the cost of input.
R10	West Africa Umb of Coops	- Mostly the price of rice is determined by local and international factors such as cost of labor, exchange rate, input costs, transportation among others, making the commodity price volatile with no clear pricing system.
R11	South Asia Umb of Coops	- Cooperatives works with the government and negotiate the government control price with them. - We always pay attention on international and regional price, and update daily pricing in the market for members' reference. Attention is paid on currency fluctuations as it is the main reason of market price fluctuations.
R12	Africa Think-tank/Gov	- The market price information on rice is sourced from both government support price and regional and international price. - Since a large quantity of rice is imported, information from regional and international sources is highly relevant and this enables the government to estimate how much can be imported. - The rice market is highly influenced by external factors including the currency depreciation and other local factors such as rise in fuel prices and inflation.
R13	Southeast Asia Umb of Coops	- Cooperatives are still using cash prices. These are published through the saving and credit cooperatives, and are reflected in the actual buying and selling of rice in the market place.
R14	East Asia Ag Organization	- We refer to the government support price and market price. The prices are very stable and clear.
R15	Southeast Asia Ag Organization	- Besides the government support price, we use prices in the market place and regional price.
R16	Oceania Think-tank/Gov	- The people's nutrition is mainly taken from domestic starch products, but import of rice has doubled in 15 years since 2005. We import from China, Thailand, Chinese Taipei, India and Burma.

R17	Southeast Asia Ag Organization	- The Government regulates the price in the market for basic commodities like rice, meat and fish. - Farmers can directly market their product to consumers for higher income and less middlemen intervention.
R18	Southeast Asia Ag Organization	- Market place and government support price.
R19	South Asia Umb of Coops	- Mandy's and farming committees are common sources for collecting such price information. - Supply and demand situation at the local level, transportation costs, and regional preferences play major role in determining the reference prices. - Different rice varieties have their specific price points. For instance, reference prices vary among long-grain, short-grain, and aromatic rice. The quality and grading impact its price significantly.
R20	East Asia Umb of Coops	- At present, actual transaction prices of end-users are used as indicators. The rice production volume and crop condition index are referred to for determining the prices. - In the past, prices established by the Rice Price Formation Center and the Government purchase prices played significant roles as indicators for pricing. They have now been discontinued.
R21	Southeast Asia Ag Organization	- Based on the international market needs particularly for traditional markets, the future price based on the plans or predictions from other export markets, international price (FOB or C&F), regional price, currency fluctuation and also based on the logistics and production cost.

Q10: What is the proposal, recommendation or policy regarding rice you elaborated to address challenges such as climate change, Covid-19 and/or price-hike in 2022/23?

It was observed that the diverse and unique initiatives were being developed by many stakeholders to address challenges especially on climate change and Covid-19. Many of them tried to reach information at the national level to their grass-root members and vice versa, especially in terms of the relationship with the government. Farmers' organizations and cooperatives especially in Asia specially focused upon encouraging small-scale farmers when they elaborated their own activities. It should be noted that some organizations in the regions used climate change and Covid-19 as a leverage to launch new initiatives, such as digitalization and environmentally friendly farming. Specific answers by the respondents could be summarized as follows;

	Sub-Region Type of Org	Descriptions
R1	Southeast Asia Consumers' Coop	- The coop calls farmers for planting alternate crops such as cassava and peanut in the area rice production is not suitable due to natural conditions. - The coop helps young people to tackle the global warming by adapting the measures that are already addressed in the community.
R2	Southeast Asia Umb of Coops	- Support farmers groups with social accountability and build financially capable
R3	Southeast Asia Umb of Coops	- The organization participates actively in the thematic workshops relevant to agroecology organized by the regional platform in ASEAN region. - To ensure access to information regarding Covid-19 and prices-hikes, the organization addresses to build capacity of its member farmers to handle smartphone and computer.
R4	Southeast Asia Umb of Coops	- The organization encourages its member cooperatives to establish effective links between their officers and member farmers to be active for environmental protection in agricultural production. - Its member cooperatives adopt good practices taking proper balance between livestock and farming, maximizing the reuse of waste products as fertilizers, animal feeds and bio-fuels. - Its member cooperatives try to purchase products from their member

		farmers at advantageous prices and provide guidance on reducing pests and diseases, increasing productivity and ensuring quality.
R5	South Asia Ag Organization	- Promoting technical and non-technical support-based activities with farmers in areas such as cultivation of paddy, efficient use of fertilizers, alternative irrigation practices and projects, and innovative practices in paddy cultivation to stabilize regional production levels.
R6	South Asia Food Company	- Addressed climate change in ways of nutrient management by using local bio-products, less tillage, use of integrated pest management approach, and wet and dry irrigation. - Addressed price hike in a way to declare our product price (MRP) based on the cost of product with a reasonable profit which is not the case in other similar products.
R7	Southeast Asia Umb of Coops	- Direct selling from the farmers to the consumers though cooperative although limited.
R8	South Asia Umb of Coops	- Lobbying to the Government for policy revision and support for farmer members. - Implement agriculture-related projects. - Develop and implement SDGs guidelines for coops. - During the nationwide lockdown, provided services to apply safety measures. - Connected farmers' products in local, regional and central market. - Conducted awareness programs on Covid-19 and precautions. - Income generating activities especially for Covid-affected, returnee migrants and persons in poverty. - Supported the funds to fight against Covid-19. - Collaborated with development partners on climate change adaptation and quality assurance.
R9	South Asia Ag Organization	- Lack of proper information system to monitor the situation by the relevant authority needs to be addressed. For example, the Government suddenly decided to introduce import ban of chemical fertilizer in the situation organic fertilizer was unavailable in the market. Rice was imported without proper understanding of stock that resulted in wasting imported rice.
R10	West Africa Umb of Coops	- The organization engaged in advocacy by asking government and relevant authorities to support members with subsidies on inputs and by engaging financial institutions to provide micro-finance to the

		members.
R11	South Asia Umb of Coops	- The organization introduced supply chain system to address Covid-19, requesting member cooperatives to deliver in big bulks and buyers to discount for such bulk orders to ensure low market price. - The organization established distribution center at provincial and district level to ensure more efficient distributing channel throughout the country.
R12	Africa Think-tank/Gov	- Extensive research in the development of environmentally sustainable and resilient rice varieties by both research and state institutions is recommended. - Strong collaboration between the Ministry of Agriculture and farmer organizations to enable the uptake of innovations is anticipated.
R13	Southeast Asia Umb of Coops	- The organization opened the "Cooperative Exhibition Center" in the capital city area where members' specialties are displayed. QR code is put on each product and the Facebook page is open to PR the products.
R14	East Asia Ag Organization	- The climate change and Covid-19 have not put huge influence on local rice price.
R15	Southeast Asia Ag Organization	- During the outbreak of Covid-19, we tried to produce more healthy products, studied to change marketing method like online marketing.
R16	Oceania Think-tank/Gov	- The Government places agriculture and livestock as the top priority. Agriculture is key to grow the economy by promoting small/medium enterprises, promoting food security by replacing imports, increasing exports, empowering rural people and increasing employment. - The Government allocates sufficient funding annually in support of its priority policy for the agricultural sector.
R17	Southeast Asia Ag Organization	- The organization operates a demo farm for members' learning. It buys those produced at this farm at a reasonable price and sells them directly to its members. - The organization also suspends interest on members' loans until they submit a documented report about their farming operation.
R18	Southeast Asia Ag Organization	- The organization is promoting farmers to produce diverse varieties, grow rice using compost, and use local animal resources to produce maximum benefits.
R19	South Asia Umb of Coops	- The organization's best practice is agro-forestry to mitigate negative effects of climate change. This practice promotes not only reduction of

		GHG, but offers numerous benefits to women and communities. - The organization advocates for allied farming activities which include kitchen gardens at local markets that not only deliver food but also offer a source of income. This helps preserving the environment while enhancing food production and equity.
R20	East Asia Umb of Coops	- The climate-resilient crop varieties tailored to specific environments are developed at the experiment station in each prefecture. Cooperatives encourage members to switch to these new varieties. - To ensure all producers make easier access to the government support measures to address rising cost of production materials, each cooperative disseminate information about the support measures and assist farmers to apply them.
R21	Southeast Asia Ag Organizations	- The organization collaborates with the Institute to carry out research for developing climate resilient seedlings, training farmers for climate friendly production techniques, reducing chemical, etc.

Q11: Any other complementary practices regarding rice implemented to address challenges such as climate change, Covid-19 and/or price-hike of commodities in 2022/23.

It is observed that cooperatives and agricultural organizations regarded a variety of training programs for members as the effective ways in response to the changing environment. Some organizations pointed out that better livelihood programs of farmers to improve quality of their life was essential. Cooperatives worked to increase their incomes by reducing production and transportation costs, while there were only a few successful cases to materialize better prices for farmers. Collaboration with companies or other players in the value chain is considered as what they need to address more. Specific answers by the respondents could be summarized as follows;

	Sub-Region Type of Org	Descriptions
R1	Southeast Asia Consumers' Coop	- Help youths develop their skills in farming and help them develop how to develop and improve agricultural activities.
R2	Southeast Asia Umb of Coops	- Provide capacity building.
R3	Southeast Asia Umb of Coops	- Conducted field visits to provide advisory support directly to farmers and their cooperatives. - The organization supports farmers in networking to buyers, service providers, etc., and strengthens their capacity to store and mill rice to ensure sound delivery of rice to the market.
R4	Southeast Asia Umb of Coops	- Support technology for the safe and green production through the cooperative model. - Agricultural services for using safe input. - Be the wholesalers or center agents for selling outputs (post-harvest). - Take advantage of local and national government policies, especially in raising funds, better administrative procedures, and promoting good agricultural practices.
R5	South Asia Ag Organization	- Promotion of milled rice as nutritional food (more nutritious than par-boiled rice in a market dominated by steam/par-boiled rice).
R6	South Asia Food Company	- The company hosts awareness events within the working areas (on climate smart agriculture practices and technologies) and helps

		farmers and other stakeholders use social media to share knowledge. It also supports (although limited) showing farmers weather forecast.
R7	Southeast Asia Umb of Coops	- The organization facilitated logistics from government storage to the consumer cooperative, introduced members importance of organic farming and direct selling from farmer to consumer through cooperative.
R8	South Asia Umb of Coops	- Lobbying with all level governments to provide reasonable price to both farmers and consumers reducing the middlemen's cost. - Projects on alternative energy consumption in cooperatives for climate adaptation. - Facilitating remote access of the members for two-way communication, awareness, consciousness class and so on during the time of pandemic.
R9	South Asia Ag Organization	- Introduced short-term harvest varieties to reduce negative effects of climate change, but it's not the 100% solution. - Started educational programs for farmers to learn from the publication of meteorology department.
R10	West Africa Umb of Coops	- The organization hosts training programs to its members on best safety measures, water resource management and facilitating market linkages to sell their produce.
R11	South Asia Umb of Coops	- The organization encourages its members for home garden system, providing loans and guidance for members to develop this system. This activity is successful and many families manage their daily food requirement under this system. They get some extra income from this activity and cooperative outlets sell their products with reasonable price.
R12	Africa Think-tank/Gov	- Social acceptance of improved and locally produced will mass education and awareness. - The government in coordination with local producers and the media intensified education using multiple media outlets, especially radio and television to increase awareness on locally produced highly improved and nutritious rice.
R13	Southeast Asia Umb of Coops	- The organization developed additional marketing channels to distribute members' products and requested the Government to compensate raising costs of production such as those of fertilizers

		and gasoline. - The organization also hosted the special training course on the current world trade situation which was funded by the Government.
R14	East Asia Ag Organization	- More government extension station and agriculture experts are necessary. This will help to find new variety of rice resistant to pests and diseases in response to climate change and Covid -19.
R15	Southeast Asia Ag Organization	- Studied about the people's needs in current life as well as the online marketing method.
R16	Oceania Think-tank/Gov	- The profitability of agricultural exports and imports should be driven by public investment in infrastructure, climate conditions, political stability and world market conditions. - Government economic policies such as exchange rate and price policies also influence agricultural trade.
R17	Southeast Asia Ag Organization	- We encourage members to diversify their livelihood program not just focusing on one commodity production, and to apply clustering to meet the demand on volume term of the market.
R18	Southeast Asia Ag Organization	- Collected information on regarding the impact of climate change. - Organized meetings with the government and private sector. - Organized joint regional climate meetings. - Utilized the fund to develop seed of rice and vegetables, produce compost and demonstrate rice production with less water. The fund was used for helping members invest in agri-business.
R19	South Asia Umb of Coops	- Digital financial literacy awareness training program for staff and members (Apps like G Pay, Phone Pe, and NEFT) in regional languages. - The organization's members combat supply chain disruption by creating their own. The organization extended its support during the crisis for creating their own supply chain, their newer markets, and sharing tasks to correct market imperfections to fulfil food and business survival needs.
R20	East Asia Umb of Coops	- Some of its member cooperatives purchase fertilizers and other materials collectively to keep prices in check. They offer members some advantages which helps them reduce the financial burden when they purchase inputs. - Negotiations with wholesalers and retailers are conducted to ensure that the increased production costs are reflected in selling prices,

		ultimately allowing farmers to maintain profitability. - In an effort to reduce production costs, member cooperatives encourage its members to use organic fertilizers and compost to ensure the farming practices more cost-effective and sustainable.
R21	Southeast Asia Ag Organization	- There are some solutions such as market solutions, products and ecological advantages through sub-regional linkages, smart varieties, techniques, water saving, green technology and GHG reduction, organizing production and integration policies.

Q12: The results of the best practices and other complementary practices regarding rice.

It is observed that some stakeholders, especially in exporting countries, got positive outcome in terms of commercialization, digitalization, market orientation and adaptation to consumers' preference, while others succeeded to strengthen some aspects related to livelihood in rural societies through their practices. One pointed out only limited progress was made by farmers, while others said partnership and networking with the government, UN institutions and development agencies were effective. Specific answers by the respondents could be summarized as follows;

	Sub-Region **Type of Org**	**Descriptions**
R1	Southeast Asia Consumers' Coop	- The cooperative assists its farmer members to join government insurance scheme for their crops and finance their agricultural financing expenses by lending a money with lower interest. It helps monitor their finances.
R3	Southeast Asia Umb of Coops	- The organization has let family farmers, women and youth be involved in other development programs run by the Government with the funding of the UN agencies to diversify their incomes. - The organization hosted the national policy workshop for stocktaking, setting up a working group, sharing lessons and reviewing existing policies to have better prices for the agroecological produces.
R4	Southeast Asia Umb of Coops	- Digital transformation is an effective tool for farmers, small businesses and cooperatives to produce and do business better and more sustainably. - Cooperatives need to identify factors such as target of market, market segment, and quality standards. Such information will create values by digitalizing a production process towards online trade via the internet.
R5	South Asia Ag Organization	- Efficient use of fertilizers via training and information sharing on best practices, and the development of transferrable paddy saplings produced by the coop and provided to farmers. - Enhanced partnerships with other similar cooperatives for product procurement and sales stability. - Transparency in pricing across procurement and sales established

		within its internal members and cooperatives via its internal annual reports (regional).
R6	South Asia Food Company	- Use of climate smart technologies by farmers such as dry and wet irrigation for rice, less use of chemicals and pesticides, planned harvesting of crop, aggregation and transport. - Use of internet to reduce travel time and resources. Cost and resource efficient last mile delivery in the city area.
R8	South Asia Umb of Coops	- The virtual studio was beneficial for members to conduct their virtual program in awareness, production related workshops. - The three-level market intervention through cooperative market development program helps to create local to central markets which benefit farmers in terms of both market access and reasonable price.
R9	South Asia Ag Organization	- Slow progress at only less than 10% to the target because farmers' network is not so strong to cover the entire country.
R10	West Africa Umb of Coops	- Organized workshops and town-hall meetings to share experiences of best farm practices among members. - Developed a digital market platform to create market linkage between farmers and consumers with features such as product traceability, availability, authenticating, delivery and online payment option.
R11	South Asia Umb of Coops	- Could understand on consumers preference and consumers behavior in commercialized market. - Established cooperative-based market.
R12	Africa Think-tank/Gov	- The crop research institute has significantly contributed to the development of improved rice varieties which enabled local farmers an improved access to improved varieties capable of withstanding climate change - rising temperature, soil nutrient loss and low rainfall patterns. - The Ministry has partnered with local farmer groups to enhance dissemination and uptake of the improved varieties.
R13	Southeast Asia Umb of Coops	- Digitalization is smart technology with new modern platform. It must be invested for small scale farmers. - The organization organizes new module of training course focusing on commercialization skills and development of cooperative supply

		chain production. We look for domestic and global trading partnership.
R14	East Asia Ag Organization	- Rice self-sufficiency rate can be maintained above 95% as far as agricultural experts who offer quality rice breeding and farmers who follow the production traceability policy collectively work.
R15	Southeast Asia Ag Organization	- Got better quality, variety of products to meet the customers' demand and got higher price that helped farmers get better income.
R16	Oceania Think-tank/Gov	- Rural households produce cash crops (coffee, cocoa, palm oil) and depend on cash economy, while urban households depend on rice and other imported foods for consumption.
R17	Southeast Asia Ag Organization	- We produce what is in demand of the people. - Organic farming is appreciated although it is less in productivity but compensated by higher prices.
R18	Southeast Asia Ag Organization	- Family farmers: support more farmers to adapt to climate change and get access to the fund for COVID-19. - Fertilizer: approved some funds for members' use - Transportation: negotiated with companies to help farmers in compensating a part of transportation cost. - Partnership: networking among buyers and farmers. - Youth: organized the youth committee to support young farmers making income, starting their business, capacity building, etc. - Small-scale farmers: supporting grant, trainings, marketing information, facilitation, etc.
R19	South Asia Umb of Coops	- The comprehensive approach was taken to support 120,000 women members such as financial support, health provision, digital literacy training and vital emotional assistance. - Women farmers receive financial assistance that allowed them cultivate high-value crops.
R20	East Asia Umb of Coops	- Member cooperatives consolidated and simplified the range of production materials for the use of farmers and helped farmers to adopt low-cost production techniques to reduce production costs. - Member cooperatives discount the fertilizer prices by accepting advance orders from farmers or pick up themselves by setting specific pickup points and dates. This measure has got good reputation among farmers.
R21	Southeast Asia Ag Organization	- The organization get more benefits on commercialization, meets the needs of consumers with higher quality of rice.

		- Farmers get more benefits from rice cultivation protecting their health with less chemical pesticides.

Q13. What can your organization do to enhance market transparency of rice?

Among stakeholders, there are growing expectations on market transparency as far as the information is collected from reliable and unbiased sources and is provided under the neutral platform. It is necessary to have an effective policy mechanism to regulate potential manipulation and/or hiding of information. To secure these conditions, it is necessary to identify what type of information is needed by each party, i.e. national and local governments, farmers, agricultural cooperatives, food industry, traders, consumers, etc., who should act in or be associated with the value chains in balanced ways. It is also necessary to strengthen their mutual network with each other. The importance of research and development should also be recognized in this context. Furthermore, persons, especially those who live in remote areas such as small farmers, take advantage of accessing market information via digital platform and social media, but it should be noted they are cautious about how the data accessed by farmers are utilized secondarily. These are summary of what participants in the workshop on rice under this project discussed in December, 2023 at the Kasetsart University in Bangkok, Thailand.
Regarding submission to the questionnaire, the followings are summary of the answers by the respondents;

	Sub-Region **Type of Org**	**Descriptions**
R1	Southeast Asia Consumers' Coop	- Update the latest price and high-grade products for the farmers.
R3	Southeast Asia Umb of Coops	- Worked actively with the Government, private sector, development agency and academia to ensure profitability for small-scale farmers. - Work with UN agencies, etc., to share knowledge on nutrition.
R4	Southeast Asia Umb of Coops	- Transparency on market conditions and policies can help reduce market uncertainty, expose bottlenecks and highlight risks. - It also helps to avoid panic buying and counterproductive policy interventions. Yet, transparency requires investments for gathering information and monitoring development of market conditions. - The availability of reliable information in times of crisis depends on investments made during calmer times.
R5	South Asia Ag Organization	- Develop a platform for focus group discussions within the farmers with regards to pricing, procurement, production, sales, and partnerships to promote more financial transparency at procurement and production level.

R6	South Asia Food Company	- The company, working for small farmers and government stakeholders, declares minimum support prices and maximum retail price based on the cost-benefit analysis which ensures transparency in the value chain.
R7	Southeast Asia Umb of Coops	- Coordinate the supply and demand of our members. - How farmers can get good price and consumers good quality and feasible price.
R8	South Asia Umb of Coops	- Intervening in the country's policy, institutional development and behavioral changes of farmers. - Establishing central market for agricultural products to minimize the part of middlemen. - Can work for storage, processing and marketing. - Implement the actions of SDGs.
R9	South Asia Ag Organization	- We are not happy about the transparency of the market, because the market is controlled by a few large-scale private traders. We provide advisory services to farmers on the movement of the market. - Government participation has to be improved in the rice market in order to maintain high level of transparency than the present situation.
R10	West Africa Umb of Coops	- Introduced some measures to mitigate negative impacts that includes setting up inventory collection, quality control committees, in identifying the potential threats to food security.
R11	South Asia Umb of Coops	- Market transparency is one of the most important things in fair trading system. - All the coops display the price list, with which dates for production and expiration are mentioned as well. A new customer feedback system, ran by either digital or manual platform, was introduced at all outlet.
R12	Africa Think-tank/Gov	- Farmers who are at the base of the value chain must equally have access to relevant market information to enable them to plan their production activities. - The government must partner with research institutions and the private sector to increase the creation of reliable data that can aid in market projections and estimates. - The lack of reliable data seriously impedes market transparency.
R13	Southeast Asia Umb of Coops	- Trade transparency allows market participants to make better, informed decisions and helps increase the efficiency in pricing and reduce transaction costs.

		- However, markets can suffer if there is too much trade transparency and even reduce participation in the market.
R14	East Asia Ag Organization	- Establish a joint transportation and marketing of agricultural products and inter-market supply and marketing mechanism. - The prices of agricultural products can be easily found in the public information service of the wholesale market to enhance transparency.
R15	Southeast Asia Ag Organization	- To minimize possible risks of food security and malnutrition, we enhance market transparency by studying about the products and customer needs.
R16	Oceania Think-tank/Gov	- Although developed countries are limited in their policy supports to agriculture under the WTO rules, it is important to understand the magnitude of price distortions, some of which are unrecognized.
R17	Southeast Asia Ag Organization	- The organization condemns any hoardings of product just for profit. When a commodity is held by middlemen, we may face higher price of that commodity at the expense of the consumer.
R18	Southeast Asia Ag Organization	- To enhance market transparency, the organization organizes meetings between farmers and companies to promote contract farming.
R19	South Asia Umb of Coops	- Standardized reporting helps ensure information more comparable and accessible. - Collaboration among the Governments, regulatory bodies, businesses, and investors is vital in ensuring market transparency, reinforcing stability, accessibility and affordability and integrating all markets.
R20	East Asia Umb of Coops	- While the prices of production materials as well as distribution costs have been rising, the increased costs have not been fully transferred to selling prices. In this context, coops need to strengthen its buying power. - Market transparency can be enhanced through the discussion among various players in the supply chain from producers to consumers, that ultimately lead to the fair price formation that farmers expect.
R21	Southeast Asia Ag Organization	- Export companies should obtain information from international market. Farmers should update all market information. The data of production process should be digitalized to ensure transparency.

2) Maize

Q8: Based on the "Forecast Global Supply and Demand for Grain 2023/24", what are the similarities and differences in the current market conditions for maize?

For many countries in Africa where population is growing, maize is one of the staple crops and is a source of nutrition. Substantial ratio of consumption depends on maize. Some respondents in Africa mentioned about the regional trade of this commodity. Apart from human nourishment, maize is consumed as animal feed and is used for industry which is one of the uniqueness of this commodity. Many respondents pointed out maize is easily affected by pest and diseases, drought and climate change that impacts production and causes price volatility. Specific answers by the respondents could be summarized as follows;

	Sub-Region Type of Org	Descriptions
M1	East Africa Ag Organization	- Maize is one of the staple crops in the country providing 45% of daily calorie consumption. - The country contributes the maize supply to East Africa for 67%. The main substitutes are wheat, sorghum, millet and rice. - Maize production has been declining since 2020/21 because of poor rainfall, and the country is facing a production deficit. - Maize imports are rare but take place due to bans and restrictions of inter-regional trade, or in production uncertainty, etc. - Prices are increasing unseasonably because of depleted carryover stocks and below-average harvest.
M2	South Asia Ag Organization	- The followings are similarities and differences with the "Forecast"; ✓ Similarities • The production has increased. • Farmers' income has increased. ✓ Differences • Increased the total cost of transportation • Lack of mechanization in harvesting
M3	East Africa Ag Organization	- Local market is not so stable like the global market. The only similarity is the volatilities that affect across the spectrum.
M4	West Africa Ag Organization	- The conditions are similar because of developments in technological innovations that have made information flow available and accessible

		by all stakeholders in the value chain.
M5	West Africa Ag Organization	- The followings are similarities and differences with the “Forecast”; ✓ Similarities • Maize is in high demand across the world, and is used for human nourishment, animal feed, and industrial purposes. • Meteorological conditions can affect production and the global market. ✓ Differences • There are regional and annual differences. • The market varies according to the government policy including subsidies, trade agreements, and regarding infection and pest outbreaks. • Production shocks, changes in demand, etc. affects prices.
M6	West Africa Umb of Coops	- The growing need to meet domestic consumption is expected to drive the market growth. - A significant volume of domestically produced maize is kept at the producer households, and imports/exports are minimal. - Despite the domestic production, the country still needs to import.
M7	West Africa Umb of Coops	- The monthly prices in 2022-23 are all above their average values for 2018-20. The relative differences vary between 9% and 50% for 2022 and between -1% and 73% for 2023.
M8	East Africa Food Company	- The current market condition of maize is affected by the enforcement of the East African standards of maize to make sure there is no market for bad maize. - Due to the bumper harvest, the Government has facilitated and subsidized the production of grain in the army, police and prisons that are good consumption market offering good prices.
M9	South Asia Food Company	- Similarities ✓ The global forecast that shows solid gains in maize production suggests potential opportunities to increase production and enter into the market. ✓ Growth in maize consumption could mean a steady demand for maize and is a sign positive for business prospects. - Differences ✓ The expanding global stocks especially in the US is crucial to consider how this might affect pricing and competitiveness of

		small-scale farmer in Asia. ✓ The reduced estimates in the US and Canada potentially impact the global market dynamics.
M10	East Africa Ag Organization	- Corn gives better benefits to farmers in terms of productivity and marketability as well as consumer demands and business. - However, farmers have low storage experience since maize is easily affected by diseases.
M12	East Africa Ag Organization	- Maize production is affected by threats, such as weeds, insects, low-quality seed, low levels of mechanization, suboptimal post-harvest management, drought and climate change. - The major driving factors for increasing production are the increasing population and the increasing demand for maize from other sectors like animal feed. - Implementing policies that support production of good quality grain and reduce grain rejections will enhance trade opportunities and food security from maize produced at small holder level.
M14	Southeast Asia Umb of Coops	- Maize is a main ingredient for animal feeds in the country. - Price may vary constantly, while the need of this grain products doesn't go down. - The population increases, hence consumption of animal-based product also rises. - The higher demand of the consumers, the higher supply needed. The low supply comes higher price of the commodity.
M15	East Africa Think Tank/Gov	- Maize is one of the main food crops in the country whose production accounts for more than 70% of cereals. - In MY2023/24 is anticipated to increase roughly 3% as more farmers switch to corn production in response to high prices.
M16	East Africa Ag Organization	- Trade and consumption of GM maize is prohibited. As the tariff on imported maize is 50%, it is not possible to source maize from the international market. - The local maize prices have increased dramatically to the point consumers bought a ton of maize at over USD800 when the world market prices were about USD250. - The high logistics and freight costs, particularly for inland transport, further drives up the unit cost and prices. - The crop failures due to droughts and declining productivity coupled

		with high input costs depressed supplies and depleted stock-holdings that further pushed the prices up. - Therefore, in the region, maize prices are projected to remain high and they are key drivers of inflation.
M19	East Africa Umb of Coops	- The maize market varied according to the demand and supply. The supply has been so low due to climate change and diseases. The demand was not met that caused price hikes and volatility. Production cost was so high due to high input costs.
M20	Southeast Asia Consumer Coop	- Some farmers tend not to plant yellow corn due to decreasing demand on animal consumption. - African swine fever has affected the huge part of the livestock industry. Also, many farmlands being planted with maize have converted to residential and/or commercial purposes. - Climate change affected the production of maize. - Price increase in raw materials and crude oil, gasoline and electricity may affect the production of maize. - Some farmers may have been hesitant due to financing and maize supply will be decreased. - Decreasing availability of labor force on farming was a threat in production.

Q9: Which kind of market price information do you collect and use as reference price for maize?

Many kinds of market price information including cash price, farm-gate price, government support price, wholesale/miller price, retail price, projected future prices are referred to by different stakeholders. The information was sourced from the government publication, commodity exchanges, information agencies, agricultural associations, cooperatives and business organizations, website, database, media, etc. Apart from the price information, respondents were keen to collect information regarding fuel price, transportation cost, prices of fertilizers and seeds, exchange rate, etc. How to share the collected information with their members seemed to be what the respondents thought up. Specific answers by the respondents could be summarized as follows;

	Sub-Region Type of Org	Descriptions
M1	East Africa Ag Organization	- The market price information is collected from the market places, trading industry price publication and the government price list publication. - Data collection is used for future price determination. - The information collected include; ✓ the current price at which maize are purchased or sold, ✓ the price at which quantity supplied and the rate at which quantity of the product demanded, - Knowing the difference between the highest price and the actual price benefits consumers. - The information helps producers to understand the country's position at the international prices and the regional prices, hence controlling price fluctuation.
M2	South Asia Ag Organization	- Primarily, we collect market information at local and provincial level for price and market related references. - Government support price is announced by the Government, but not implemented by retailers or industries. - Local market set their own price which is popular in our business context.
M3	East Africa Ag Organization	- Food inflation indices that most of the governments provide.

M4	West Africa Ag Organization	- Market and cash prices.
M5	West Africa Ag Organization	- Exchanges for commodities as benchmark futures prices for maize. - Agencies gathering and reporting market information. - Agricultural associations and business organizations offer details about pricing and market circumstances unique to their regions or industries. - A number of websites and databases provide historical or real-time price data for agricultural products, including maize. - Local markets, coops and ag trade organizations provide more detailed pricing information. - News organizations specialized in agriculture and experts covers the state of the market and prices.
M6	West Africa Umb of Coops	- Prices are determined by farms based on the production cost. - Most farms do not store their products, but sells them soon after production.
M7	West Africa Umb of Coops	- The collection of data from traders in large urban markets and the use of statistical and economic tools. - The analysis is based on the hypothesis that various shocks (climate change, conflicts) aggravated by COVID could affect the functioning of markets and change the price levels for basic foods.
M8	East Africa Food Company	- Market-place prices, buying and selling prices, fuel prices, wholesale and retail prices, transportation prices.
M9	South Asia Food Company	- Regularly check the official support prices at the Department of Marketing and Cooperatives. These government-mandated prices form the anchor of stability and predictability in my maize business. - Frequently consult the Food Corporation's website for pricing insights since the rates typically align with government policies. - My reliance on the international grains markets is limited as they tend to exhibit significant volatility, which may not always resonate with the specific dynamics and requirements of my local market.
M10	East Africa Ag Organization	- Government support is provided to non-governmental organizations such as the clusters and cooperatives so as to play their part in development and market system. - Priority is given to corn with special attention to fertilizers, seeds, credit supply for cooperatives, trainings for the players in the value

		chain.
M11	East Africa Ag organization	- No guaranteed price by the government.
M12	East Africa Ag organization	- The market price information collected includes cash price offered for small holder farmers, and projected future prices. - Market price information I am using include 1) regional grain price, 2) trade data including price variations due to currency fluctuation, 3) market price data and 4) weather/environmental data.
M13	South Africa Ag Organization	- Government support prices in government granaries, cash price for the current maize prices in local markets and future price for the next season. - Government support prices are twofold: 1) subsidized prices for inputs like fertilizers and seed 2) reduced prices for maize in government sponsored maize granaries and food reserve agency. - Currency fluctuation details are not directly collected, but they are available from the National Statistical Office. - The market price information helps us to advise our farmers and consumers to plan on their finances and budgets in the growing season and for consumers to plan how much maize to store.
M14	Southeast Asia Umb of Coops	- Market place, regional price and government support price.
M15	East Africa Think Tank/Gov	- Data collection is done by extension officers who visit the market places and wholesalers for three days per week. Then, the regional agriculture officers compile the reports sent from municipal level and submit it to the Ministry of Agriculture. - News is also used for the information at local and international levels. - Currency fluctuation is another factor that render market price. - The war in Ukraine in March 2022 dramatically changed the Ukraine Corn FOB prices.
M16	East Africa Ag Organization	- Price information such as wholesale/miller prices, retail and farm gate prices, is collected from the key market places in the region. Volumes of cross border trade, from source to destination is also collected for key border points. - The price and volume data are uploaded in our system. They are analyzed and reported back to members through the daily bulletin and

		the website, and are referred for commercial and policy decisions. - Production forecasts are collected and utilized for food balance sheet at the national/regional levels to determine the surplus and deficit countries and predict cross border trade. Currency conversions are undertaken to determine the regional prices.
M17	North Africa Umb of Coops	- The government supports prices during the plowing seasons. She subsidizes maize, sorghum, and beans for farmers every plowing season.
M18	West Africa Think Tank/Gov	- Market place.
M19	East Africa Umb of Coops	- Actual farmgate price, cost of production per bag, cost of inputs, quality of grain and attached price.
M20	Southeast Asia Consumers' Coop	- Base on the prevailing market price, but the price should not be lower than the production cost. Market costs include post-harvest and hauling activities and materials to effectively market the maize. Mark-up price is added in the cost. - The cooperative has its own pricing scheme. Once prevailing market price was observed, the said price will offer to non-members. For members, the cooperative adds at most PhP0.30 per kilo of the product.

Q10: What is the proposal, recommendation or policy regarding maize you elaborated to address challenges such as climate change, Covid-19 and/or price-hike in 2022/23?

Similarly, as in the case of rice, it was observed that the diverse and unique initiatives were being developed by the stakeholders, regardless of the type of organizations. They listed up specifically, 1) development and dissemination of digitalization and market information systems, 2) post-harvest and improved storage, 3) increased productivity through improved crop varieties, and crop diversification, 4) promotion of sustainable agriculture through irrigation, effective water management, use of organic fertilizers and soil conservation and 5) capacity building and awareness creation among farmers, etc. Furthermore, it should be noted some respondents mentioned about their experiences of networking with other stakeholders including foreign partners, collaboration with the national and/or local governments, and partnership with international organizations. Specific answers by the respondents could be summarized as follows;

	Sub-Region **Type of Org**	**Descriptions**
M1	East Africa Ag Organization	- Capacity building for youth and women in the areas of agricultural technologies, post-harvest handling and value addition of the dried stored maize. - Fostering the resilience of family farmers in times of crisis such as price volatility, unstable markets and high weather risks. - Creating awareness of farmers and streamlining their focus on producing food, planting of early maturing trees and use of energy saving cook stoves. - Provision of technical know-how on management and planting of food. - Digitalization of agriculture in delivering extension services.
M2	South Asia Ag Organization	- Focus on reduction of chemical fertilizer, increasing agro-forestry and agriculture awareness during the last 4 years. - Capacity building for commercial farmers on farming technique and financing to launch agri-business. Support harvesting and purchase from them. Grade, pack and deliver quality products. - Increased number of new farmers during the Covid-19 pandemic.
M3	East Africa Ag Organization	- Training farmers on post-harvest handling practices.

M4	West Africa Ag Organization	- Training farmers on general agricultural practices and developing their capacity to understand market dynamics.
M5	West Africa Ag Organization	- Research for sustainable ag practices, including drought-resistant varieties and climate-smart techniques. - The University can provide training and education to farmers, extension workers, and policymakers. - Engage in partnerships with governmental agencies, NGOs, and industry stakeholders to jointly address challenges. - Collect and analyze data to track the impact of climate change and other challenges. - Develop online education and training programs during the COVID-19 pandemic. - Encourage diversification in agriculture and income sources to mitigate the impact of price hikes on commodities. - Advocacy and policy influence that support sustainable agriculture, climate mitigation, and pandemic preparedness.
M6	West Africa Umb of Coops	- Engaging members to start adopting irrigation systems and stop depending on rain for farming. - Engage foreign partners to support mechanization to address price volatility.
M7	West Africa Umb of Coops	- Our market information system made it possible to compare corn prices during the crisis year to those before and after the crisis.
M8	East Africa Food Company	- Technology advancement, extension services to farmers, borrowing to stock during bumper harvest and sell later in scarcity, respond to bids with stock positions.
M9	South Asia Food Company	- Crop diversification from maize to climate-resilient and drought-tolerant crops as a safety net against unpredictable weather-related crop losses. - Use of organic fertilizers, improvements in water management, and a strong emphasis on soil conservation. - Well-informed decisions about the optimal times to sell maize, maximizing profitability and counteracting the impact of price fluctuations. - Collaboration with local partners and crafting contingency plans, which guarantees timely application of inputs and the efficient distribution of products.

M10	East Africa Ag Organization	- Send timely meteorological forecasts to the ag development station staff and support them to educate the farmers. - To address the diseases, provide protective clothing with health professionals so that the producers do not harm the society.
M11	East Africa Ag Organization	- We are working with international organizations to seek funding to help farmers to mitigate climate change issues
M12	East Africa Ag Organization	- Climate smart technology generation and scaling to address production and postharvest challenges at farm level. - Breeding and promotion of disease resistant high yield drought tolerant crop varieties to address effects of climate change. - Using nutrient dense foods and promotion of fortified foods to vulnerable sectors such as childbearing women and children. Research for protein rich maize and bean varieties. - Value addition to improve quality and market access of grain. - Technologies such as hermetic bags, plastic and metal silos, need optimization and scaling to address losses during grain storage. - Development of an effective grain postharvest loss reduction and grain marketing policy. - Incentives still needed for farmers to produce quality grain. Poor grain quality, rejection and low market access could be reduced if proper policy and innovative actions were implemented.
M13	South Africa Ag Organization	- trainings on Covid-19 prevention, food budgeting, food balance sheet, post-harvest handling, climate smart agriculture, manure making, conservation agriculture, use of drought tolerant varieties. - 9 irrigation schemes helped farmers increase yield of the maize. - Farmers using manure and conservation agriculture have realized better harvests.
M14	Southeast Asia Umb of Coops	- The Coop tried to come up with a solution to meet the target bulk of grain supply and stabilize the commodity price in the area. - The Coop developed the "Integrated Farming System"; a) training of farmers, b) loan with lower interest rate, c) inputs and technical assistance and farmers pay with their harvest.
M15	East Africa Think Tank/Gov	- Climate change has been identified as a threat to maize production due to associated increases in temperature and changes in rainfall patterns. - The Covid-19 affected farmers in ways such as 1) decline in local

		markets, 2) employment loss, 3) reductions of farm output and income, 4) lack of imported inputs, 5) fear to continue farming, and 6) reduction of work efficiency.
M16	East Africa Ag Organization	- Expanded the market information system. This service collects climate forecast information and disseminates to the members. - Operate platform that connect farmer groups to the buyers (traders /millers) to negotiate terms, sign trade contracts, certify the commodity, supervise loading, facilitate logistics, etc.
M17	North Africa Umb of Coops	- Buy farm inputs from suppliers/manufacturers to minimize the high price. - Transport and store the farm inputs into communities where farmers come with wheelbarrows to collect them, and then facilitate transport their products to the market.
M18	West Africa Think Tank/Gov	- Investments in storage facilities at the community level
M19	East Africa Umb of Coops	- Embraced a cooperative model which is a backward approach of first securing the market and subcontracting the farmers to produce for a specific market. The contract has a floor price which cushions against price fluctuations. - Delivery of inputs in profiled stores where farmers can collect their inputs to address covid-19. This way ensures availability of inputs and continued production during covid and post covid period. - Digitalized extension services to the farmers to address climate change. Working with partners on insurance and meteorology institutions to advice farmers on planting dates.
M20	Southeast Asia Consumers' Coop	- The cooperative collaborates with the Department of Agriculture to ensure farmers good agricultural practices. - Members were given with shallow tube wells by the local government units to ensure adequate water to maintain crops. - As to raw materials, the government provide free seeds especially to small holder farmers. Farmers convert some of their synthetic fertilizers to naturally produced fertilizers. - As to price, the cooperative base buying price from production module and prevailing market price.

<u>Q11: Any other complementary practices regarding maize implemented to address challenges such as climate change, Covid-19 and/or price-hike of commodities in 2022/23.</u>

There were many overlaps with the answers to the Q10. Aside from those, some respondents pointed out the importance of better livelihood programs for farmers to improve quality of life that included gender responsive activities, collaboration with the health groups/facilities at the community level and capacity building to strengthen resilience to natural disasters. Others mentioned about the necessity to introduce crop insurance schemes. Advocacy by engaging policy makers and reflection of their voices at regional and international levels, through networking with public and private international forums, were also referred to. Specific answers by the respondents could be summarized as follows;

	Sub-Region **Type of Org**	**Descriptions**
M1	East Africa Ag Organization	- Finding out a fundable business model for farmers and other supporting agencies to invest in their businesses. Targeted measures are both food securities and greater financial security. - Promoting diversification of energy matrix through renewable energies. Producing biomaterials and using agricultural waste for energy generation, composting and bio-fertilization. - Promotion of rural connectivity through 4G or 5G internet and investment in rural roads. - Promoting village saving and loan association and financial institutions to improve rural credit.
M2	South Asia Ag Organization	- Major 2 projects are currently under implementation;wqeeffffff (1) the Model Farming (2) the Commercial Farming - Commercial Farming focuses on production and sales of large- scale farmers who try to get more profit to sustain their business. - Model Farming focuses on training of farmers, dissemination of new tools and technology that helps to reduce production cost and increase in productivity.
M3	East Africa Ag Organization	- Working closely with the local governments.
M4	West Africa	- Provision of market information and knowledge management

	Ag Organization	strategies.
M5	West Africa Ag Organization	- Extension services to offer local communities and farmers assistance and guidance. - Developing climate-resilient crop varieties to diversify agricultural production and reduce the risks associated with climate change. - Promoting community-led adaptation initiatives that provide locals the power to direct their own efforts to improve resilience. - Working with local health groups/facilities to give medical assistance for COVID-19 management and immunization campaigns, particularly in remote and underserved areas. - Promoting local entrepreneurship and economic diversification by assisting small businesses and community-based organizations. - Promoting conservation, sustainable practices, and community-led projects through encouraging environmental knowledge. - Providing training courses on community resilience, including readiness, response, and recovery from disasters. - Doing research and utilizing the results to influence local, regional, and national policies and strategies, making sure that community concerns are taken into account in policies.
M6	West Africa Umb of Coops	- The complementary practices with mechanization of agriculture should be the use of organic fertilizer.
M8	East Africa Food Company	- GAP including climate smart practices to farmer groups and cooperatives. - Sustainable storage at cooperative and rural levels. - Enforce regional market quality standards. - Implement the common tariffs as ratified by partner states. - Commercialization of agriculture.
M9	South Asia Food Company	- Capacity enhancement that allows members adapt ag practices to address climate change, as well as health and safety training to ensure members well-prepared to COVID-19. - Exploring options for crop insurance to benefit our members. This step furnishes financial security in case of crop failure, thus lessening the impact of unpredictable climate variations. - Pursuing diversification of marketing channels, such as direct-to-consumer or, manufacturer models and online sales platforms.
M10	East Africa	- Evaluation by supporting and monitoring of works, persuading the

	Ag Organization	community, supplying inputs, etc.
M12	East Africa Ag organization	- Improving traceability of grains. More adaptive studies to attain increased commercialization could be done. Generate marketable products, study consumer preferences could be strengthened. - Cooperatives can reduce transaction costs and thus profitability of maize production. Crop insurance especially at small holder level could be included. - Need to forge partnerships to increased volumes for export. - Gender responsive activities are still needed. - Innovations targeting the reduction of pesticide use. Investments in precision agriculture.
M13	South Africa Ag Organization	- Demonstrations, field days and tours for farmers to share experiences. - Train farmers in seed multiplication so that they are able to have plenty seed for the next growing season. - Facilitate access of government subsidized inputs like maize seed and fertilizer. - Broadcast various agricultural messages using our mobile vans. - Trainings in food processing and preservation to improve the nutrition and to avoid both under- and over-nutrition. - Farmers are organized in cooperatives for marketing of their produce.
M14	Southeast Asia Umb of Coops	- The Coop created a marketing department responsible in purchasing inputs with the price lower than the companies in the area and in buying the products in a competitive price comparing with those of middlemen. - The Coop also built the agricultural school that aims to involve the youth in agriculture sector and produce competent graduates that will help in the strengthening of agriculture in the area.
M15	East Africa Think Tank/Gov	- To have buildings and infrastructure that is safer and more sustainable. - Replanting forests to restore damaged ecosystems. Diversifying crops to better adapt to changing climates. Investigating innovative solutions to prevent/manage natural catastrophes. - The experience of COVID-19 gave us three potential lessons: 1) resilience-promoting policies, 2) community marketing schemes, and

		3) smart farming technology.
M16	East Africa Ag Organization	- Policy advocacy for members by engaging policy makers and putting forward recommendations for policies. - The apex policy advocacy platform is the African Grain Trade Summit, a biennial conference where members meet policy makers to discuss challenges facing grain trade. - Submit policy briefs, communiqués and position papers to national government and regional and continental framework. - At the International level, affiliated with the International Grain Trade Coalition (IGTC) which collaborates closely with the IGC, Global Grain Geneva and other international fora.
M17	North Africa Umb of Coops	- Engaged our government to build infrastructures like greenhouses and set up irrigation systems in the four regions targeting the farm groups (coops).
M19	East Africa Umb of Coops	- Working with stakeholders to participate in food forums and climate delegations like COP meetings to give our position on the subjects which have been adopted previously. - Work with the East Africa Business Council to ensure market related challenges that relate to farmers.
M20	Southeast Asia Consumers' Coop	- The coop's technical officers focus on monitoring the progress of farmers' production. - The coop cooperates with different agencies like the Agricultural Training Institute to provide training to its members. - The coop teaches members on record keeping, and encourage youth to be involved in corn production. Farmers use machineries in preparing land, seed planting and harvesting. - The coop is planning to collectively rent the members' farmlands so as to cultivate and improve their farms. The coop will use farm machineries to lessen labor requirements to finish the work faster.

Q12: The results of the best practices and other complementary practices regarding maize.

Respondents saw many positive results in their activities. For example, many pointed out increased number of commercial farmers as a result of empowering them through capacity building and other supporting activities. Digitalization and smart technologies helped farmers and others in the value chain reduce vulnerabilities with respect to production and marketing, especially in the conditions of the Covid-19 pandemic. There were strong expectations and confidence on crop insurance that could potentially cover any loss under price volatilities and climate-related failures. Enhanced supply chain resilience, stakeholder participation, youth engagement, adoption of conservation agriculture, etc., among others were also pointed out by respondents as positive results of their best practices. Specific answers by the respondents could be summarized as follows;

	Sub-Region Type of Org	Descriptions
M1	East Africa Ag Organization	- Decreased hunger and poverty due to the increase in production and productivity. Enhanced household income, food and nutrition security and improved livelihoods of family farmers. - Farmers have been able to make their farms more resilient and ensured food and nutritional security. - Family farmers invested in tree planting and used agricultural waste for energy generation, composting and bio-fertilization that helped reduce erosion, increase carbon stock of soils, etc. - Increased connectivity in the vulnerable areas to facilitate agricultural digital transformation and marketing strategy. - Small-scale farmers were linked to banks and micro-finance institutions. Risks in the agribusiness credit were reduced. - Producers became to understand customers preference.
M2	South Asia Ag Organization	- The number of commercial farmers is increasing. Organic products, mechanization, financial access and data driven agriculture practices are getting more popular. - Youth and businesses in the supply chain are interested in agriculture. People are increasingly helping in the process of production or marketing.
M3	East Africa	- Farmer-led advocacy.

	Ag Organization	
M4	West Africa Ag Organization	- Access to finance, climate smart agriculture, agri-tech, policy advocacy, crop insurance, weather forecasting, value addition, quality assurance, etc.
M5	West Africa Ag Organization	- research and innovation, climate-smart farming techniques - capacity building - resilience - collaborative initiatives - data and monitoring - virtual learning and pandemic preparedness - economic diversification - impact of price hikes - advocacy and policy influence - sustainable agriculture; climate mitigation - pandemic preparedness at local, national, and international levels - promoting local entrepreneurship - economic diversification - small businesses; community-based organizations - promoting conservation; sustainable practices; community-led projects; climate and sustainability goals; environmental-knowledge and activism; community resilience training - community resilience; readiness; response; recovery-from-disasters - research impact - policy impact - climate change adaptation - healthcare policies - agricultural policies - extension services - local markets - cooperatives; agricultural trade organizations - pricing information; news on agriculture - expert forecasts; climate-resilient agriculture; climate-resilient crop varieties - community-based adaptation initiatives; agroforestry; soil improvement - internationalization

		- green economy - food security - sustainable development; stable productivity; sustainability - climate change adaptation.
M6	West Africa Umb of Coops	- Commercialization is the main alternative to help farmers.
M7	West Africa Umb of Coops	- Commercialization, digitalization, transportation, value chain, vulnerability, youth.
M8	East Africa Food Company	- Value chain support. - Sustainable storage including rural-based ones. - Commercialization of agriculture. - Strong extension system. - Cooperative formation and farmer organization support. - Patient financing and working capital to the value chain. - Strong seed system. - Uniform enforcement of market quality standards. - Digitalization of agriculture to enhance productivity and precision.
M9	South Asia Food Company	- Capacity enhancement empowered our members with knowledge and skills and positively impacted productivity and resilience. - The exploration of crop insurance has significantly reduced the vulnerability of our members to climate-related crop failures, providing financial security. - Market expansion has improved commercialization and allowed us to align with consumer preferences which ensured steady demand for our products. - Crop diversification has made us less dependent on a single crop and has increased our participation in the broader value chain, leading to improved nutrition and income for our members. - Adoption of sustainable farming practices has boosted resilience to environmental challenges such as desertification, and has reduced the use of harmful pesticides and fertilizers. - Strategic market analysis has mitigated the impact of price volatility and enhanced our members' financial stability. - Enhanced supply chain resilience ensured the availability of essential resources and reduced the risks of financial institution and investment.

M10	East Africa Ag Organization	- Increase in production and productivity if we take care of climate change in appropriate conditions. - Stakeholder participation has a significant role in preventing climate change. - Justice, police and others work together to bring better results to reduce the exposure to Covid-19. - Educate and take action against greedy traders who increase prices without supply.
M11	East Africa Ag Organization	- Subsidy on fertilizer.
M12	East Africa Ag organization	- Some of the results of the scaling of climate smart technologies have been seen in reduced vulnerability of farmer families. - Grain handling through cooperatives has resulted in reduction in transaction costs. - The promotion of drought tolerant varieties has reduced the effect of crop failures due to drought and water stress. - Youth engagement is critical and will need more strengthening. - Organization of the different parts of the value chain such as during transportation and create partnerships will increase trade. - Studies to handle price volatility and increase per unit productivity of maize are still needed. - Precision farming is yet to be done but can be initiated in the region. Nutritional and safety concerns are also key issues which will require partnerships.
M13	South Africa Ag Organization	- Increased productivity from 2.5 to 3.5 tons/ha due to irrigation. - Most farmers found markets for their produce due to the various agribusiness trainings. - Newly formed cooperatives help farmers, who used to be ripped off by buyers, having stronger bargaining power. The stronger position of farmers helped reduce their vulnerability. - Farmers who adopted conservation agriculture produce in more sustainable way unlike those who produce in conventional way. - Rolled out projects that are doing crop insurance for farmers.
M14	Southeast Asia Umb of Coops	- Continuously provides resources farmers need like fertilizers, seeds/planting materials, pesticides, etc., in a reasonable price. - Provides technical and financial assistance to ensure quality and

		high productivity. - Decreasing number of farmer members who produce agricultural products like maize. The Coop put priority on training youths, but some of them already left agriculture.
M15	East Africa Think Tank/Gov	- Digitalization helps farmers trade their products any time despite the Covid-19 pandemic, while only few of them benefited from digitalization due to the lack of knowledge and affordability. - Crop insurance is beneficial to farmers as it will cover any loss due to unavoidable circumstances like covid-19 pandemic, drought, flood and other natural disasters.
M16	East Africa Ag Organization	- Successfully established the information hub, where farmers take advantage of enjoying economies of scale, reducing production cost and fetching better prices by accessing better markets. - The quality of the grain has improved. - Mechanization progressed though lease finance, etc. Aggregation of information has improved traceability.
M17	North Africa Umb of Coops	- Extended central services such as joint procurement, supply of farming inputs, raw materials, access to technical services and investment, and joint marketing. - Will provide crop and animal insurance services to its members.
M19	East Africa Umb of Coops	- Digitalization allowed us to reach the farmers through video and SMS on extension services. - Inclusion of women and youth on our programs on agribusiness. - Strategic partnerships on market, finance, climate and inputs to ensure effective business models. - Commercialization of agriculture.
M20	Southeast Asia Consumers' Coop	- Farmers increased their per ha production. Loans given to the farmers were paid and had an income of at least PhP50,000 per ha per cropping. Records were intact in farm household and to be used as their basis for the next planting season. - Farmers directly delivers their produce to the cooperative to eliminate their marketing burden. Price is according to the market price and production module, farmers are happy.

Q13. What can your organization do to enhance market transparency of maize?

THIS PART WILL BE SUMMARIZED FOLLOWING THE RESULT OF THE GROUP DISCUSSION AT THE WORKSHOP, February 7, 2024, IN LONDON, UK.

	Sub-Region **Type of Org**	**Descriptions**
M1	East Africa Ag Organization	- Empower supplier/producer in terms of the skills and knowledge to identify potential risks, problems or constraints. - Empower producer/supplier in terms of the knowledge to come up with mitigation plan to minimize potential risks, understand the customers' preference and create awareness of the product. - Capacity building of supplier/producer to make up promotional strategy that will help to achieve the product break. - Understand customer type and their identified needs. - Identify the types of relationships with the buyers or customers - Understand the sales method (direct sales, contracts, etc.) - Understand the key product attributes such as variety, quality, presentation, packaging, etc. - Understand how the products are different from competitors' products
M2	South Asia Ag Organization	- Securing market transparency in agriculture is important. Otherwise, prices are not defined on the investment and other inputs. - Market transparency helps standardizing the producers' prices, and controlling the price differences between consumers and producers.
M3	East Africa Ag Organization	- Conducting more research and dissemination of the information to small-holder farmers.
M4	West Africa Ag Organization	- Linking producers directly to the market through technology enabled market information system.
M5	West Africa Ag Organization	- Establish a research center whose mission is to gather, examine, and disseminate information about the food markets. - Create and manage market information systems that offer regular or real-time updates on market circumstances. - Cooperation between ag organizations and the government in exchanging and supplementing market information. - Provide farmers, traders, and other stakeholders with training

		programs and capacity-building efforts. - Establish early warning systems that can identify and notify stakeholders of possible crises in food security. - Examine the effects of supply chain disruptions, trade regulations and climate change on food prices and availability. - Advocate for legislation to ensure fair trade, market transparency, and safeguards against speculation and market manipulation. - Consumer education about the value of informed decisions about their purchases and the market to eat healthier. - Local market initiatives working with neighborhood groups to enhance the area's food markets. - Utilize technology to spread market information more effectively and to a larger audience. - Partnerships with other universities, research institutes, NGOs, and international organizations. - Continuous monitoring and evaluation to assess impact initiatives.
M6	West Africa Umb of Coops	- Continuous education of members on the benefit of market transparency will be necessary.
M7	West Africa Umb of Coops	- Daily monitoring system of prices in the strategic markets of the 17 countries our organization covers
M8	East Africa Food Company	- Cooperation other than competition works in the grains market. - Knowing market prices enhances forecasts and improves value chain players' negotiation skills for better gains. - Consumers can plan and manage their budgets accordingly for better resource allocation.
M9	South Asia Food Company	- We can collect and disseminate vital data on maize production, pricing, and local market trends. We can collaborate with cooperatives to establish local market platforms which facilitates transparent price negotiations and fair buyer-seller interactions. - We can harness local media, community meetings and digital tools to circulate essential market information, weather forecasts, and crop reports. - We can engage with the Government to advocate for policies and programs that foster market transparency. - We can strive to attain certification for our maize products, adhering to quality and safety standards. We can extend our support to small-

		scale maize growers through training initiatives.
M10	East Africa Ag Organization	- The agricultural institute should work to raise the awareness of agricultural experts, provide feedback to the government and traders, and pay attention to farmers to ensure information. - Monitor the market price so that greedy traders do not change it inappropriately and to report to the authorized office. - Make recommendations to NGOs to support the market value chain. - Make recommendations from the authorized institution for the establishment of shopping centers. - Create transparency about what kind of products are produced and where they are available.
M11	East Africa Ag Organization	- Vulgarize information with members.
M12	East Africa Ag organization	- Market transparency will reduce the risk of food security crises and malnutrition in the country and the region. - Research should be done to identify bottlenecks to market information delivery. - The existing linkages to farmers and other private sector partners and local and international partner can be utilized to develop a system to access market information. - Information on the necessary dietary intake for specific groups, on the food tables and necessary constituents from locally available foods for different categories of people. - Other packages can be on existing trends in grain sells and how farmers can position themselves to access these markets.
M13	South Africa Ag Organization	- Use mobile unit campaigns using the Public Address system to announce whatever market information is available. - The Ministry of Agriculture releases minimum farm gate prices every year at harvest times. We disseminate this information to farmers so that they are not ripped off by vendors. - Supervise various selling markets to make farm produce being bought at the right prices. - Facilitate buyer-seller meetings. - Contract farming is one of the methods of price control and market transparency. Agreed prices are set in the contract agreement to avoid hiding or duping of information at the time of sales.

M14	Southeast Asia Umb of Coops	- The Coop will most likely continue the programs that benefit both the farmers and consumers.
M15	East Africa Think Tank/Gov	- The government announces the market prices based on the data collection activities of the officials. The information is available on the website of the Ministry and through the radio, television and the magazines. - Areas with sufficient supply of specific agricultural products are identified and announced to the public. - The government helps reduce the cost of inputs by providing fertilizer and seed subsidies to farmers for the purpose to stabilize the market price of agricultural products.
M16	East Africa Ag Organization	- Can enhance market transparency through partnerships with governments, development partners, academia and research institutions. - Analysis of the data to develop market information reports and bulletins that can be shared widely to stakeholders. - Partnership with media to disseminate information such as production estimates, stock holding levels and the info on the food balance sheet can enhance market transparency.
M19	East Africa Umb of Coops	- Building strategic one-stop and brings-together partnerships with other value chain actors which will unlock challenges on markets.
M20	Southeast Asia Consumers' Coop	- It is important that our organization must be updated on the current trend of the marketability of its product and the prices of all the products/services along the value chain. - We will know to what extent we will offer buying prices to our farmers. We could help in maintaining a balance pricing system from producers to business services providers and consumers. - We should ensure education to our members on the up-to-date technology and market demands to cope up with innovations. - Our cooperative must also venture on farm digitalization to keep up breast with the changing time.

3) Wheat

Q8: Based on the "Forecast Global Supply and Demand for Grain 2023/24", what are the similarities and differences in the current market conditions for wheat?

Although the global market information was widely appreciated by the respondents, they also recognized that there was uniqueness in their domestic market due to climate conditions, geopolitical security situations, consumer preferences, etc. Specific answers by the respondents could be summarized as follows;

No.	Sub-Region Type of Org	Descriptions
W1	South Asia Think Tank/Gov	- Usually rely on the information of IGC and FAO's Food Outlook reports. For prices, IGC and FAO's FPMA. - Our main concerns are domestic production. Preseason forecast for production and monitor climate situation during the growing season from November to April is done. - The world forecast is helpful in making decisions regarding imports. Import decisions rely on domestic production/stocks situation in the country.
W2	Middle East Think Tank/Gov	- The country is a wheat importer from Ukraine and Russia. Wheat sector was negatively affected by the war. - The country is a big wheat grower and there was a price volatility in the market.
W3	Central Asia Ag Organization	- Wheat market remains in flux as production has shifted away because of the climate change and land degradation. Facing lower regional production, notably at the areas around the Black Sea. - Disruptions from geopolitical conflicts, severe weather and logistic snarls have upended traditional trade flows and driven price volatility. Buyers faced supply and price uncertainty.
W4	East Asia Food Company	- As an importing country, closely looking at the information in the U.S., Canada and Australia that are the source of imports.
W5	East Africa Ag Organization	- The market price of sande has been increasing to compare with the world price, due to production costs, labor prices and transportation costs including fuel prices.
W6	North Africa	- The wheat market is highly influenced by both domestic and global

	Consumers' Coop	factors; ✓ Similarities • Dependence on international wheat market prices. • Government subsidies and regulations. • Influence of weather conditions on domestic production. ✓ Differences • Fluctuations in global wheat supply and demand. • Domestic economic and political situation. • Variation in consumer preferences and dietary habits.

Q9: Which kind of market price information do you collect and use as reference price for wheat?

Most of the respondents answered they collected international prices (FOB or C&F) and domestic prices. The latter varied from the government support prices and others including the market prices, cash prices, future prices, etc. They sourced the international prices from the international institutions like the IGC, and the domestic prices from their government, news, etc. They monitored the local prices in exporting countries, input prices such as for seeds, transportation cost, etc., as well. Specific answers by the respondents could be summarized as follows;

No.	Sub-Region Type of Org	Descriptions
W1	South Asia Think Tank/Gov	- For domestic prices, we rely on prices of the Government's Bureau of Statistics and AMIS Punjab which are available online. - For international prices, IGC and FPMA.
W2	Middle East Think Tank/Gov	- No data is collected by my institution.
W3	Central Asia Ag Organization	- Market players must keep up-to-date with the changing prices and drivers. - Global and local news and prices help managing risks and making right business decisions. - The government does not help wheat producers. This caused them launching sabotage and strikes.
W4	East Asia Food Company	- International price (FOB), local price in exporting countries, freight and currency exchange rates are major information of reference in our daily operation.
W5	East Africa Ag Organization	- Government policy, market price, consumer preference, productivity, availability of different technologies, availability of industries, improved seed demand, nutritional value, food security, contract farming and occurrence of insect and diseases.
W6	North Africa Consumers' Coop	- The government support price is set as a minimum support price to ensure farmers get a fair income. - The market place prices vary across the regions depending on production levels, transportation costs and local consumption.

		- Cash prices which are essential for understanding the current value of the commodity. - Future prices which stakeholders refer to international wheat futures markets for hedging strategies. - International Prices, especially FOB or C&F, are critical for assessing import costs and market trends for importing countries.

Q10: What is the proposal, recommendation or policy regarding wheat you elaborated to address challenges such as climate change, Covid-19 and/or price-hike in 2022/23?

Like other commodities, it was observed that the diverse and unique initiatives were being developed by the respondents to address their challenges. Those with agricultural organizations replied helping their member farmers to avail advanced technologies and innovations was essential. A wheat importer tried to change the timing of making contract with domestic users. A consumer cooperative listed social activities such as employee well-being support and community engagement as their initiatives in this context. Think-tanks mentioned about potential necessity to reframe subsidy system of wheat. Specific answers by the respondents could be summarized as follows;

	Sub-Region Type of Org	Descriptions
W1	South Asia Think Tank/Gov	- Already facing a food crisis due to climate change that reduced domestic production and stocks and the country was obliged to import certain amount of wheat. - Covid-19 impacted the cost of transportation. - The Russia-Ukraine conflict caused high prices, and the Government subsidized imported wheat to stabilize domestic market. - The Government increased wheat procurement price mainly due to high international price, and also subsidized for stabilization of domestic prices. - There is a need to invest on technologies/research/availability of seeds, climate friendly practices to increase the wheat yield.
W2	Middle East Think Tank/Gov	- Subsidy system need to be reformulated. The input prices sharply increased. - Particularly small holders would face an option to leave the production. Need to extend more resilient crops for small holders. More investment is needed for irrigation.
W3	Central Asia Ag Organization	- Helps local producers getting intime information on market prices, import substitute strategies, and extension and advisory services. - Helps farmers with reaching the advanced technologies and innovations, bio stimulants and eco-friendly products.
W4	East Asia Food Company	- Changes the timing of making contract with domestic users depending on the market situation to secure the necessary quantity

		of wheat imports.
W5	East Africa Ag Organization	- Experiences to overcome the basic problems encountered in the process of wheat production and to continue the production work. - Selection of drought resistant species, choose fast growing varieties and use of species that are economically desirable. - Coordinating and using water treatment works. - Cultivation of acidic soil carried out on a large-scale production.
W6	North Africa Consumers' Coop	- Implemented the following to address challenges related to climate change, Covid-19 pandemic and the price-hike; ✓ Sustainable Practices to Tackle Climate Change ✓ Diversification of Supply and Resilience Planning ✓ Remote Work Policies and Technology Integration ✓ Employee Well-being and Mental Health Support ✓ Supply Chain Resilience ✓ Community Engagement and Social Responsibility ✓ Data-Driven Decision Making ✓ Agility and Scenario Planning

Q11: Any other complementary practices regarding wheat implemented to address challenges such as climate change, Covid-19 and/or price-hike of commodities in 2022/23.

Activities to take advantage of technology and innovation including intercropping, crop rotation, introduction of disease resistant varieties, etc., was the answer from the respondents. Other replies included contract farming, partnerships and diversification of the source of imports. Specific answers by the respondents could be summarized as follows;

No.	Sub-Region Type of Org	Descriptions
W1	South Asia Think Tank/Gov	- Intercropping with legumes and crop rotation is useful to increase domestic production. - The procurement prices should decrease as international prices have significantly decreased comparing with those in 2022.
W2	Middle East Think Tank/Gov	- Technology transfer to small holders dealing with cereal products.
W3	Central Asia Ag Organization	- Helped farmers in crop harvesting and minimizing post-harvest losses. - As a net wheat importing country, farmers need to be supported by the state to stabilize prices so that consumers meet dietary needs and increase the level of household food security
W4	East Asia Food Company	- Exploring the feasibility of new import sources (countries, varieties) which may satisfy the needs of domestic users in terms of quality and price.
W5	East Africa Ag Organization	- Various field events for exchange of experience. - Use of wheat varieties that are better in terms of productivity and resistant diseases. - Contract farming to work better by coordinating with industries.
W6	North Africa Consumers' Coop	- Adopted several complementary measures to further enhance the benefits to the members; ✓ Education and Awareness ✓ Resilience-Building Programs ✓ Local Sourcing Initiatives ✓ Collaborative partnerships ✓ Innovation and Technology Adoption.

Q12: The results of the best practices and other complementary practices regarding wheat.

While there were positive outcomes, such as increased production through digitalization, climate-resilient practices and diversifying supply chain. On the other hand, there were still challenges including the need for product validation of resilient crops and programs targeting cooperatives and family farmers. Specific answers by the respondents could be summarized as follows;

No.	Sub-Region Type of Org	Descriptions
W1	South Asia Think Tank/Gov	- There is a need to decrease prices for consumers. - Domestic production can be increased through digitalization of agriculture, particularly in terms of fertilizer and water use. - Climate resilience practices can be helpful in decreasing cost of production including fertilizer and tillage. - Productivity can be increased through climate resilient seeds.
W2	Middle East Think Tank/Gov	- Product validation for resilient crops need to be more focused.
W3	Central Asia Ag Organization	- Farmers are less empowered by the government. Young farmers tend to leave rural areas to cities. - Food systems need transformation and transparency. Programs should be targeted for cooperatives and family farmers.
W4	East Asia Food Company	- Stable imports of wheat were achieved despite the turmoil of the international market due to the pandemic and the war. - Under the State Trading System, the government introduced special measures to mitigate the impacts of rising prices to domestic users and consumers.
W5	East Africa Ag Organization	- Specialization of commodity cluster approach, continuous monitoring and evaluation, commercialization, fertilizer, integrated pest management, contract farming, finance institution, good policy for agriculture production, transportation, nutrition, mechanization, productivity, production, harvesting value chain, small scale farmer, irrigation, youth job, land preparation, planting, input credit available, package training, market demand, price volatile pesticides, good agricultural system, customer preference, cooperative credit, value

		addition, technology transformation, especially wheat irrigation production, good rainy season, best agro-ecology, different seed production company, gender, food system and post-harvest handling.
W6	North Africa Consumers' Coop	- The best practices and complementary measures have yielded significant positive results; ✓ Resilience and Quality by diversifying supply chain and investing in local sourcing that ensured a steady supply of quality wheat. ✓ Sustainability and Environmental Impact that reduced the environmental impact and promoted responsible practices to combat desertification and pesticide use. ✓ Community Engagement and Collaboration with local communities and other organizations that empowered small-scale farmers including youth and women. ✓ Smart Technology and Innovation that helped to improve productivity, reduce waste and enhance traceability.

Q13. What can your organization do to enhance market transparency of wheat?

THIS PART WILL BE SUMMARIZED FOLLOWING THE RESULT OF THE GROUP DISCUSSION AT THE WORKSHOP, February 7, 2024, IN LONDON, UK.

No.	Sub-Region Type of Org	Descriptions
W1	South Asia Think Tank/Gov	- Food security dashboards with open access information regarding prices, stocks, trade is important. - Governments should digitalize data which should be accessible for everyone.
W2	Middle East Think Tank/Gov	- Market transparency depends on the reliable data. - Need to make more investment on data management for market transparency.
W3	Central Asia Ag Organization	- Necessary to recognize farmers are conservative in adopting new technology and risk management mechanisms. - Training programs should be designed for farmers with necessary information and skills to accept insurance policies to be more resilient against climate risks.
W4	East Asia Food Company	- The impacts are often amplified by psychological effects (causing panic buying). - The information dissemination will help calm down the psyche of consumers.
W5	East Africa Ag Organization	- Market transparency should be developed by the government in a better way. - The way to reduce market volatility is to increase wheat production and productivity by irrigating and harvesting. - Market transparency will be ensured through various information exchange method and subsequently, all society will be aware. - They will be disclosed based on the information of the government, radio, TV, etc.
W6	North Africa Consumers' Coop	- Enhancing market transparency is a critical step for preventing food security crises and addressing malnutrition. - As a wheat-focused cooperative, can take several steps like; ✓ Data sharing ✓ Price reporting

		✓ Supply chain traceability ✓ Advocacy and policy engagement ✓ Consumer education ✓ Partnership

4) Rapeseed/Canola

Q8: Based on the "Forecast Global Supply and Demand for Grain 2023/24", what are the similarities and differences in the current market conditions for rapeseed/canola?

No.	Sub-Region Type of Org	Descriptions
R1	Middle East Umb of Coops	- Global market conditions have a direct and undeniable impact on the local market. - But the market is not a mirror reflection of the global trends. One significant factor is the influence of drought. This environmental challenge introduces variables that alter the market landscape.

Q9: Which kind of market price information do you collect and use as reference price for rapeseed/canola?

No.	Sub-Region Type of Org	Descriptions
R1	Middle East Umb of Coops	- International price (FOB or C&F). - Currency fluctuation.

Q10: What is the proposal, recommendation or policy you elaborated to address challenges such as climate change, Covid-19 and/or price-hike in 2022/23?

No.	Sub-Region Type of Org	Descriptions
R1	Middle East Umb of Coops	- Transition to digital agriculture. - Direct channels of communication. - Revision of planting schedules. - Introduction of advancements in machinery equipment. - Intelligent technologies.

Q11: Any other complementary practices implemented to address challenges such as climate change, Covid-19 and/or price-hike of commodities in 2022/23.

No.	Sub-Region Type of Org	Descriptions
R1	Middle East Umb of Coops	- Enhancement in government support measures. - Mitigation of input costs. - Comprehensive financial literacy training programs.

Q12: The results of the best practices and other complementary practices.

No.	Sub-Region Type of Org	Descriptions
R1	Middle East Umb of Coops	- The integration of digitalization and smart technology that not only reduced input costs but also enhanced involvement of young farmers. - The emphasis on financial literacy that enabled stakeholders allocate resources more judiciously which helped family farmers and small-scale producers poised to thrive.

Q13. What can your organization do to enhance market transparency?

No.	Sub-Region Type of Org	Descriptions
R1	Middle East Umb of Coops	- Contract production models establishes clear agreement between producers and buyers that fosters trust within the value chain and ensures quality standards and delivery timelines. - Digital tracking and control systems represents a pivotal step towards precision and efficiency. This will not only reduce in resource wastage but also increase overall productivity. - Integration of contract production models and digital tracking systems holds the potential to revolutionize the ag sector, driving it towards greater sustainability and competitiveness.