



Key messages

- To increase the productivity of crop and vegetable farming in Mongolia, farmers need reliable and transparent access to productive and affordable inputs (fertilizer, pesticides, seeds).
- The business model of the supply and sales cooperative is a proven success story in many countries with well-developed agricultural sectors.
- Farmers who are not satisfied with the performance of the state-owned and private input suppliers can consider setting up their own supply cooperative within the supportive framework of the Mongolian Cooperative Law.
- The supply cooperative with or without sales function requires considerable capital, administration and market entry effort.
- As an alternative, the establishment of an Agricultural Supply Service Cooperative (ASSC) is recommended, which offers member farmers services for the procurement of more favourable inputs.

Establishment of cooperative structures for the procurement of inputs in crop and vegetable production

Need for a cooperative supply of agricultural inputs

To increase productivity and expand cultivated areas in Mongolia, the use of nitrogen, potassium and manure is necessary. However, the country's manure production is limited, it mainly comes from milk cow farms with a volume of about 100,000 tons. There is no domestic production of complex fertilizers in Mongolia, as the necessary raw materials are lacking and large investments are required.

All complex fertilizers must therefore be imported. In 2023, the import volume for all fertilizer types was 152,000 tons. 99 percent came from Russia, which indicates a strong dependence on this strategic input from a single source. The imported volume was sufficient for an average use of 0.45 tons of fertilizer per hectare.

In 2023, the total import value of fertilizers amounted to USD 54 million or on average 355 USD per ton. The purchasing price of fertilizers reported by farmers is up to MNT 2 million or USD 600 per ton. There appears to be a large markup between the price at import and the price paid by farmers to the public and private suppliers. One reason is the sale of fertilizers and other inputs partly on a loan basis by the Agriculture Corporation, as 30 percent of the value is paid in advance and 70 percent is paid after the harvest. The interest for this seasonal loan is included in the increased sales price. It requires more research on further factors that determine this considerable price difference and why no further competitors enter this supposedly attractive market.

A survey was carried out among about 20 crop and vegetable farmers. It has shown that only about 10 percent of crop farmers use sufficient compound fertilizer due to the high costs. Other farmers use either less compound fertilizer, inferior liquid fertilizer, or some manure. A large share of farmers do not use any fertilizer at all, thereby wasting the potential increase in productivity.



Another reason for the low use of fertilizers is that farmers are insufficiently informed about their use and advantages. Farmers consider the supply of pesticides to be satisfactory, prices are reasonable and the supply is regular and sufficient. However, farmers complain that quality cannot be verified in some cases because the origin of the material is unknown, sales are not regulated, quality control is inadequate and there is lack of advice on the correct choice and use of pesticides.

As far as seed is concerned, many large farms produce it themselves from surplus harvested grain, while others rely on imports as domestic production is insufficient. Some farmers complain about possible quality problems with imported seeds.

Some farmers are less satisfied with the performance of the Public Agricultural Corporation (the former Agricultural Development Fund) and the private input suppliers. They criticize the quality of inputs, the timing of delivery, and the high prices. It seems that further research would be useful to assess the performance of public and private suppliers in detail.

Several farmers request that the input supply should be transferred from the public to the private sector. However, there are already several private companies, and they can hardly compete with the Public Agricultural Corporation. As an alternative to setting up additional companies, about half of the farmers surveyed are in favor of the idea of setting up a cooperative to organize input supply. Yet, they point out that high investments (infrastructure, working capital, etc.) would be required. Government support and long-term loans at favourable interest rates would be needed as the members' share capital will not be sufficient. It will take time to convince and train the farmers and to establish the cooperatives.

Most large agricultural businesses report that they import fertilizers and pesticides themselves and are not interested in setting up a supply cooperative. This leaves small and medium-sized farms as the target group.

Cooperatives as entities for organized self-help

People, who are hampered by obstacles, normally try to overcome them or, if they are unsatisfied with the conditions of their existence, attempt to improve them. In such a situation, one possibility is to join forces with other people who have the same problem or the same goals and solve the problem together with them. If the resulting self-help organization has economic objectives and possesses an enterprise, it is called a cooperative.

The most common type is a support cooperative, which only helps its members in areas where the cooperative can achieve more than the individual member. Examples include cooperatives for the supply of inputs and the marketing of produce, while members are responsible for production in individual farms.

Definition of the cooperative

A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise.

This definition is acknowledged and used worldwide. It is contained in the Statement on the Co-operative Identity of the International Cooperative Alliance (ICA). The ICA is the international apex organization of cooperatives of all types and in all regions of the world.

Benefits of the agricultural cooperative for its members

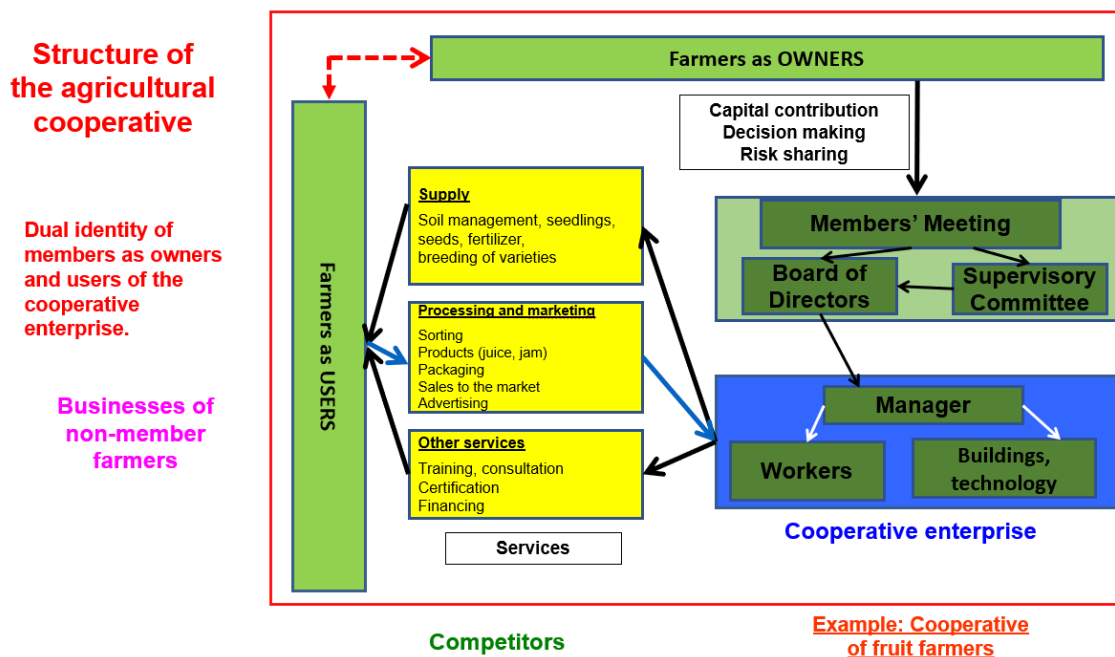
To be attractive to farmers, the cooperative must offer members advantages over the available alternatives. For example, it can reduce production costs through economies of scale (e.g., bulk purchase of inputs) and lower transaction costs (e.g., for information and transport) thus avoiding that farmers who purchase inputs or market produce are forced to use loan facilities that are not beneficial for them.

Agricultural cooperatives can also offer new services or access to resources that are not available for individual farmers, such as certification of organic farming and market information.

Structure of the agricultural cooperative

The following main characteristics differentiate a cooperative from all other types of organizations:

1. The cooperative is characterized by the self-help of members in a cooperative group of persons, the cooperative business which is owned by the members, and the member promotion as the objective of the performance of the cooperative business instead of the maximizing of profit.
2. The cooperative is at the same time an economic enterprise (business) and a social group of persons (members), which means it has a double nature.
3. The members of the cooperative have a dual identity as they are its owners as well as its users, i.e. suppliers and customers. This unique feature enables many of the advantages of cooperatives. Members let the cooperative perform the activities they need so that services are fully used and can be provided at low cost. Also, members maximize the use of the cooperative's services to increase their benefits as owners.



Functions of supply and sales cooperatives in Germany

German supply and sales cooperatives support their farmer members through the provision of inputs (fertilizers, seeds, pesticides, machines, petrol) and the sales of produce (grain, potatoes, vegetables). These two functions are usually combined to optimize the member's benefits. In addition, the operating resources can be paid for after the harvest with the proceeds from the sale of the produce. This reduces the liquidity needs of farmers and the business risk of the cooperative. Members benefit especially from lower prices in the supply of fertilizer and fodder through bulk purchases as well as from improved quality through laboratory tests. This is facilitated by the central cooperatives which purchase the inputs directly from producers in large quantities and with tested quality. For this purpose, the cooperatives need storage and transport facilities as well as experts to advise on the use of fertilisers. Later, the cooperatives also started to carry out soil analyses and offer fertiliser mixtures tailored to the needs of the individual farms.

This is even more important for the supply of plant protection materials where knowledge of the offered substances as well as their features and uses is indispensable and aided by specialists in the central cooperatives. The provision of seeds makes up only a small portion of the total turnover, but is decisive for the improvement of productivity and profitability of members. Seeds for grains and seed potatoes



are produced in special facilities that are operated by cooperatives nearby in the same region. This includes individual farms of cooperative members who have specialized in seed multiplication.

The supply and sales cooperatives support the members by providing machinery at concessional prices through bulk purchase, repair and service workshops as well as advice on their use. For machinery that farmers need only temporarily, some cooperatives own a machinery pool and rent out machinery to members or they perform the respective machine work on the farm as a comprehensive service with their machines and staff. Cooperatives jointly with public bodies can also be co-founders of machine associations from which farmers can rent, e.g., combined harvesters and other machines.

In general, the supply and sales cooperatives provided fuel only to the members for agricultural machines. This was then expanded to any kind of fuels sold in petrol stations which are used by everyone. To use additional sources of turnover, the cooperatives increasingly opened stores where the public can buy gardening and household items as well as building materials.

Turning to the sales operations of the cooperatives, they purchase produce from members such as grain, potatoes, vegetables, etc. This is sold to the professional buyers in the market either directly or through central cooperatives. Therefore, the cooperatives require storage and drying facilities to add value to the produce and to benefit from price fluctuations. Value addition can be achieved through sorting and quality control.

In produce marketing by cooperatives, a shift can be observed from selling any produce that was delivered by members to ordering certain products from members. It means that cooperatives receive orders from the market for specific types of grain, vegetables, and fruits and then advise and qualify its members to produce them. This is particularly the case when the demand for varieties changes and when standards must be observed.

Success factors for supply and sales cooperatives

The establishment and functioning of supply and sales cooperatives are supported by the following conditions that should be considered when establishing a supply cooperative in Mongolia:

1. Most cooperatives do not only provide supplies, but combine this with sales of produce, processing, sorting, provision of machines, fuels, etc. This combination expands the benefits for members and reduces the operational risk.
2. Many cooperatives extend their activities to non-agricultural areas such as the operation of garden and household goods shops open to the public.
3. There is an increasing collaboration with central cooperatives at higher levels which enables even more beneficial bulk purchasing of inputs and bulk sales. This can develop into a vertically connected system of cooperatives at various levels, which collaborate closely with an optimal sharing of work between the levels.
4. The supply business is less risky than the sales business, as the cooperative only purchases those inputs that have been ordered by its members specified by type, volume, and time. In the sales business, it is less certain which volume and quality of produce can be purchased from members and what quantity can be sold to the market and at which price.
5. The supply and sales cooperatives require considerable working capital to bridge the time between the provision of inputs to the members before planting until receiving proceeds from sales of their produce after harvest. They also require investment capital to set up extensive facilities for storage, transport, testing, etc.

Mongolian Cooperative Law as Supportive Legal Framework

The following aspects of the Mongolian Cooperative Law are most relevant for the establishment of a supply cooperative.



The cooperative has the form of a primary cooperative with at least nine natural persons as members. Its purpose can be freely chosen and the supply of inputs is therefore an eligible purpose. The cooperative must possess a Board of Directors and a Supervisory Committee each with at least three office holders (chairperson and two members). The establishment of the cooperative is mainly funded by the shares of members while the operations are financed from the business proceeds in the previous years. The cooperative may receive capital from investors which may be shareholders, but cannot become members. Regulations about the joining and leaving of members, rights, and obligations of members, responsibilities of internal bodies, shareholding, etc. are laid out in the Cooperative Law. The cooperative must possess a charter that is accepted by the founding members during the foundation meeting. The cooperative must become a member of a cooperative association of its choice.

If several supply cooperatives are set up in different regions of Mongolia, they could establish a joint cooperative at the secondary level. This would allow for a combination of the demand for inputs from an even larger number of farmers and achieve better prices through bulk purchasing. This is only feasible when several primary cooperatives operate successfully and when this structure achieves more advantages.

The Mongolian Cooperative Law and the related model charter provide clear guidelines on how to set up, structure, and manage the cooperative. The prospective founders can obtain the relevant knowledge through training and consultations. These are offered by cooperative associations and by the Mongolian Cooperative Information and Training Center of the National Association of Cooperatives.

Supporting and opposing factors for cooperative farm input supply

Based on the information which has been obtained from the surveyed crop and vegetable farmers as well as from input suppliers, an analysis of the current situation of the farm input supply in Mongolia was carried out. The following supporting and opposing factors for the organization of the supply of agricultural inputs by cooperatives have emerged:

Supporting factors

- High and consistent demand of farmers for farming inputs
- The low perception of the state-owned supplier and the limited performance of private suppliers leave room for more effective competitors.
- The high price markup for fertilizers makes the market entry for private input suppliers attractive.
- The model of supply and sales cooperatives is effective for the provision of inputs to farmers.

Opposing factors

- High challenge to establish both supply and sales functions that are ideally linked
- Market dominance and competition from state-owned suppliers with government support
- High demand for start-up capital to finance imports and infrastructure
- Financial institutions' lending policies restrict access to credit for cooperatives
- Little knowledge among crop farmers about the benefits of cooperation
- Uncertainty whether the government will support the establishment of a supply cooperative.

The basic business idea

From the above analysis, the following basic business idea of the cooperative can be derived:

1. Crop farmers have a high demand for production inputs and many of them are unsatisfied with the services of the public and private suppliers.
2. The high mark-up on the input prices supports the market entry of a new competitor with better performance and more beneficial offers for farmers.
3. The organization type of the supply and sales cooperative has proven to be effective.
4. The cooperative would have to overcome the challenges of convincing farmers to work together, raising the capital needed to set up and building effective business.

Three business model options for cooperative input supply in Mongolia

Three business models are suitable for the cooperative organization of farming input supply in Mongolia:

Criteria	Cooperative business model		
	A. Supply and sales cooperative	B. Supply cooperative	C. Supply service cooperative
1. Potential members	<ul style="list-style-type: none"> Mainly small and medium-sized crop farmers who are dissatisfied with the public and private suppliers To facilitate the establishment, about 30 farmers from the same region are founders. Later, the membership is expanded to more regions and farmers. 		
2. Main purposes	1. Supply of inputs for crop production to members such as fertilizers, pesticides, and seeds. The inputs are either imported directly or obtained from importers and the cooperative acts as distributor.		Services to members in the process of obtaining inputs for crop production through negotiations with suppliers, control of quality of inputs, conflict resolution, and advice.
	2. Sale of members' produce, such as grain to flour mills		
3. Main benefits for members	Lower costs and better quality of production inputs		
	Higher prices for the sold produce		<ul style="list-style-type: none"> Advise on choice and use of inputs Support in conflicts with suppliers
4. Suppliers	Suppliers are companies abroad that deliver the supplies to importers in Mongolia.		Business partners are companies abroad that deliver supplies to importers in Mongolia.
5. Customers	For grain-to-flour mills	None	None
6. Main sources of income	Reasonable markup on the price of supplied inputs which at least covers the actual costs (including cost of capital)		<ul style="list-style-type: none"> Fees for services provided to the members Regular membership fees
	Reasonable surplus from sales of produce which at least covers costs		
7. Main costs	<ul style="list-style-type: none"> Personnel, purchasing inputs, transport, and storage for inputs and produce Interest on loans to finance the business 	<ul style="list-style-type: none"> Personnel, purchasing inputs, transport, and storage for inputs Interest on loans to finance the business 	<ul style="list-style-type: none"> Personnel, office, testing laboratory Interest on loans to finance the business
8. Facilities and personnel	<ul style="list-style-type: none"> Office, storage for inputs, transport, test laboratory, online ordering system Management, administrators, supply and sales experts, storage workers, drivers Storage for produce Sales experts 	<ul style="list-style-type: none"> Office, storage for inputs, transport, test laboratory, online ordering system Management, administrators, supply and sales experts, storage workers, drivers 	<ul style="list-style-type: none"> Office, test laboratory, online communication system with members Management, legal expert, supply expert
9. Volume of funding	<u>Very large</u> amounts of funding are to prefinance the supplied inputs until members can pay in full after the harvest and to set up the very large infrastructure	<u>Large</u> amounts of funding to prefinance the supplied inputs until members can pay in full after the harvest and to set up the medium-sized infrastructure	<u>Small</u> amounts of funding to set up the small-sized infrastructure and personnel

Conclusion



During the desk research and interviews with farmers and suppliers, both the demand and the supply side for the provision of farming inputs in Mongolia were explored. Based on these considerations the basic business idea for a cooperative for input supply was elaborated. Three options for a cooperative with activities for input supply were identified and described. To facilitate the selection process, they are evaluated for their main strengths and challenges:

Cooperative option	Main strengths	Main challenges
A: Agricultural supply and sales cooperative	<ul style="list-style-type: none"> • Most benefits for members through the provision of input supply and sales of produce • Reduced risk through recovery of supply loans through proceeds from sales which are contracted in advance 	<ul style="list-style-type: none"> • It needs to be explored how the large capital requirement for prefinancing of supplies until sales to market and for investments in very extensive infrastructure and personnel for inputs and produce can be fulfilled. • Extensive need for market research both on the supply and the sales side before establishment • Uncertainty if farmers transfer existing sales agreements with buyers to the cooperative • It needs to be explored how the cooperative can achieve successful market entry in both the supply and the sales market at the same time.
B: Agricultural supply cooperative	<ul style="list-style-type: none"> • Medium benefits for members through the provision of input supply • Structure and activities as well as market research can be focused only on the market for input supplies. 	<ul style="list-style-type: none"> • Medium need for capital through prefinancing of supplies until sales to market and investments in infrastructure and personnel for inputs only • Higher risk as supply loans cannot be recovered through proceeds from sales through the cooperative • It needs to be explored how the cooperative can achieve successful market entry in the supply market.
C: Agricultural supply service cooperative	<ul style="list-style-type: none"> • Medium benefits for members through support services in input supply activities • Structure and activities focused only on supporting supply processes, but not on providing input supplies • Market research is needed only on the supply side. • No capital risk as loans are not provided • Low need for investment capital in small infrastructure and personnel • The expectation is that existing suppliers regard it not as a competitor, but as a facilitator. 	<ul style="list-style-type: none"> • Need for a small, but highly professional management team with experience as agricultural input brokers or agents

Recommendations

Based on the assessment of the three options identified for the cooperative organization of input supply in Mongolia, the following recommendations can be made:

1. Option A offers the greatest potential benefit to members and lower business risk, but presents the challenge of meeting the very high capital and management structure requirements.
2. Option B requires less capital, but comprises a higher business risk as supply loans cannot be offset with the proceeds from sales of the produce through the cooperative itself.
3. Option C represents a combination of sufficient benefits for members through a more beneficial input supply (lower prices, better quality, reliable delivery) with relatively low needs for capital and infrastructure.

In summary, it is recommended to first explore if a supply service cooperative according to Option C can be established. When this has been accomplished and the cooperative is providing effective services, an



expansion into the provision of supplies according to Option B or even the additional sales of produce according to Option A can be explored.

The Agricultural Supply Service Cooperative (ASSC)

Since it is recommended to first consider the establishment of a supply service cooperative according to Option C and this specific type of organization is less well known, its features are presented in more detail.

The ASSC does not purchase any input supplies itself, but it supports its members in the entire process of obtaining input supplies. The cooperative works like the broker of agricultural produce only that it deals with inputs instead of produce. It employs specialists who have knowledge and access to the actors in the entire supply chain of inputs: manufacturers, importers, transporters, distributors, and service providers. In addition, they are fully informed about the production of the members (type, volume, soil quality) and the resulting needs for inputs. Based on the analysis of soil samples, they advise the members on the most suitable inputs for their farms. The cooperative collects the orders from members through an online order system and forwards them to the most suitable suppliers who have already been selected. It monitors the fulfillment of the supply contracts and checks the quality of supplies through a contracted laboratory. In case of complaints from members about supplies, the specialists check the facts, provide advice, and mediate between farmer and supplier if requested by both of them.

The success of the specialists depends on their knowledge and experience in the supply market, their reputation in the eyes of farmers and suppliers, and their skills for transparent and effective communication with all stakeholders. The specialists know the manufacturers and importers and can forward input orders more easily than the farmer can. They have a better understanding of the market conditions and prices of inputs than the farmer does. They also research innovative inputs that come to the market and explore their advantages.

All these services will be seen as very valuable by the members because they enable them to focus on production and marketing rather than on input supplies. Comprehensive and clear agreements are made as well as the fees which members must pay for these services.

In more detail, the following ASSC services are proposed:

1. Identification and evaluation of input manufacturers, importers, and distributors based on transparent criteria and subsequent selection of preferred entities – this information is provided to members and facilitates their purchasing decisions.
2. Negotiating of more advantageous conditions for the supply of inputs with input suppliers, based on the accumulated demand of the members (bulk purchasing prices)
3. Obtaining orders for inputs from members through an online order system and channeling them to the selected suppliers while the purchase agreement is made directly between farmer and supplier. The cooperative can also conduct tenders among suppliers to identify the best offers.
4. Drafting model purchasing contracts for input supply and training for members on their use, checking of individual purchasing contracts which are used and submitted by members
5. Advising member farmers in the case of conflicts with suppliers over prices, qualities, and delivery times. If needed, linkage to specialist support for legal procedures.
6. Negotiating preferential conditions for testing of samples (soil, fertilizer, pesticides, seeds) through agreements with selected suitable laboratories
7. Close collaboration with the MNCFA for more effective representation of interests and advocacy based on the provision of verified information from the input supply market
8. Technical advice for members on a choice of inputs, correct use of inputs, assessing and improvement of soil and agricultural practices through field consultations and training by employed specialists
9. Funding of the cooperative is obtained from share capital provided by entering member farmers, reasonable regular membership fees, and fees for the provision of services at cost recovery basis.



It can be argued that some of the proposed activities could be performed by the MNCFA itself. It must therefore be clarified why it is beneficial to set up the ASSC as a separate entity besides the MNCFA.

1. As an NGO, the MNCFA is unable to receive its capital and is limited in obtaining loans and charging fees for services. The ASSC as a commercial business can be financed through member shares, loans, and service fees.
2. As an NGO, the MNCFA is obliged to serve all its many members which could exceed the available capacity. The ASSC provides services only to its fewer registered members who have co-financed the setup capacity and who pay cost-recovering service fees.
3. As the MNCFA should maintain a neutral stand about market players, the evaluation and selection of particular suppliers could entail conflicts of interest and limit its mandate for advocacy. The ASSC is not obliged to maintain neutrality and can evaluate market players based on verifiable facts.
4. An agreement between MNCFA and ASSC is recommended which facilitates the close collaboration between both entities and at the same time ensures the effective delineation of responsibilities for advocacy with the MNCFA and for supply services with the ASSC.

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Disclaimer: Views and assessments articulated in this Policy Brief are those of the authors. They do not necessarily represent the views of the German Federal Ministry of Food and Agriculture (BMEL) with whose support the German-Mongolian Cooperation Project Sustainable Agriculture (DMKNL) is running.

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