



AGRICULTURE

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CCO BRIEF ON AGRICULTURAL COOPERATION

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BRIEF ON AGRICULTURAL COOPERATION

Agriculture is of particular importance for human life and provides fundamental needs for human survival. It is also an important sector for economic and social development due to its contribution to Gross Domestic Product (GDP) and employment. It is the only source of income for the majority of the rural poor in many countries, particularly in Sub-Saharan Africa.

Furthermore, as of 2015, the world population has reached 7,4 billion people, and almost half of it lives in rural areas, where the main economic activity is agriculture. Agriculture has a vital role in the economic development of many countries, particularly for developing countries. It is accepted as a key sector for economic growth, reducing poverty and achieving sustainable rural development, especially in developing countries.¹

Agriculture in the OIC Member Countries

Agriculture is a significant sector for the economies of the OIC Member Countries, where 21 member countries are categorized as least developed countries, according to UN classification.

In most OIC Member Countries, agriculture is one of the leading sectors in terms of its contribution to income, employment, and trade. In 2014, OIC agricultural gross domestic production (GDP) reached 682 billion US Dollars with a share of 21 percent in the world's agricultural production. Furthermore, the number of people employed in the agriculture sector in the OIC Member Countries reached 240 million in 2013, which accounts for 18 percent of world's agricultural employment. Agricultural commodity trade of the OIC Member Countries has increased considerably in the period from 1990 to 2013 and reached 357 billion US Dollars.²

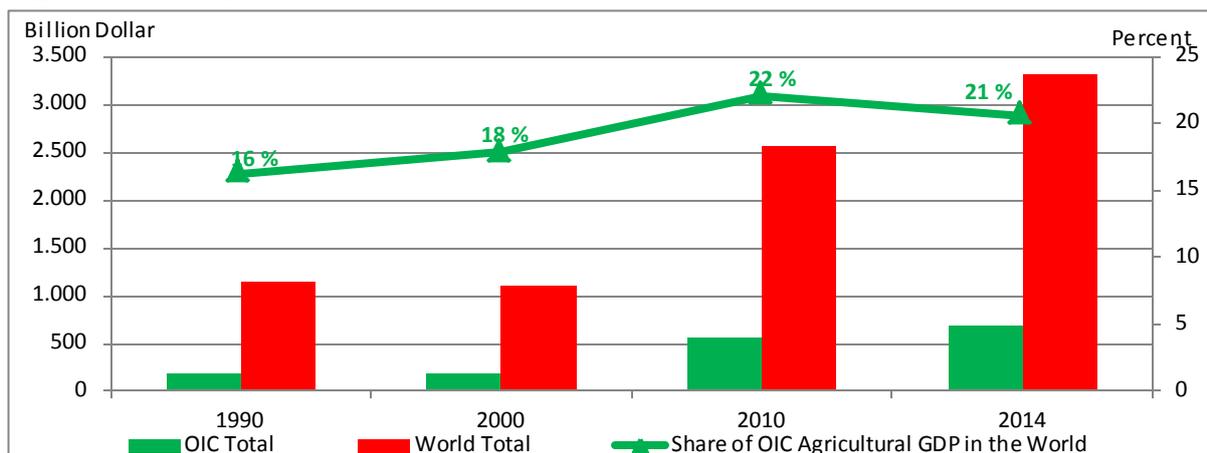
The value of agricultural production in the OIC Member Countries have been rising in the last decades due to production increase, as well as price increase. Figure 1 shows the agriculture sector's contribution to GDP and its share in the world's agricultural production. In 1990, OIC Countries' agricultural GDP was 186 billion US Dollars with a share of 16 percent in the world's agricultural production. In 2014, OIC Countries' agricultural GDP reached 682 billion US Dollars with a share of 21 percent in the world's agricultural production³. This figure shows the increasing trend of OIC Countries' agricultural production in the world agricultural production. Nonetheless, according to FAO, the OIC Member Countries have 29 percent of total world agricultural area, they have a relatively lower performance in the agriculture sector. Therefore, there is an unexploited potential in this sector in the OIC. The potential of agricultural sector in OIC Member Countries needs to be utilized to increase the share of OIC agricultural production in the world.

¹ COMCEC Agriculture Outlook 2016

² Ibid.

³ Ibid.

Figure 1: OIC Agricultural GDP and its Share in the World

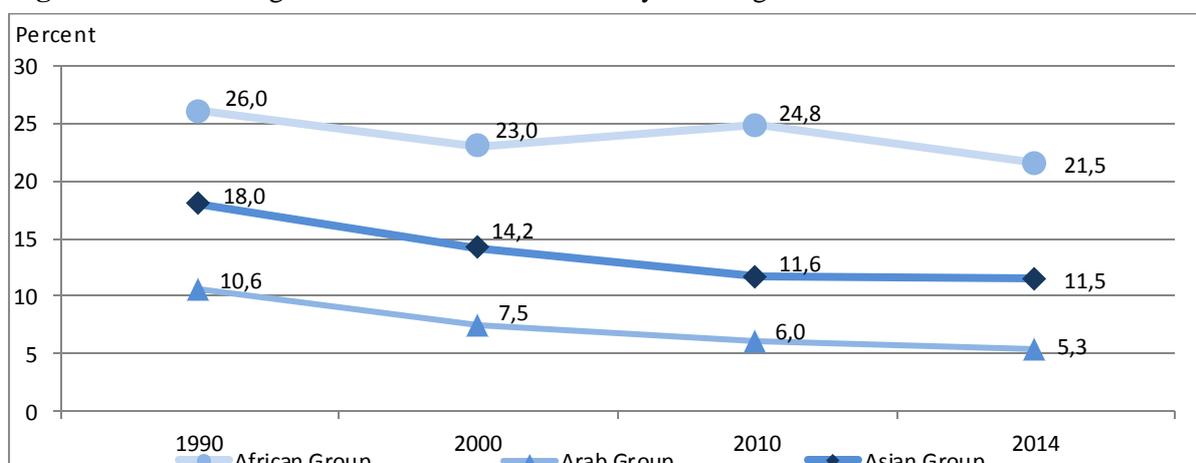


Source: COMCEC Agriculture Outlook 2016.

The OIC Member Countries are officially classified into three groups: the African, Arab and Asian groups. The contribution of these groups to the OIC total agricultural value added varies, and it shows an uneven pattern during the period of 1990-2014. Asian Group has the highest contribution to OIC’s agricultural production over the years. As of 2014, OIC agricultural GDP reached 682 billion US Dollars and the contribution of Asian group to this value is 367 billion US Dollars, which is more than half of the total agricultural GDP of the OIC Member Countries. The Asian Group is followed by the African Group and the Arab Group, with almost 164 billion and 151 billion US Dollars, respectively. In other words, from 1990 to 2014, the share of the African group in total OIC agricultural GDP has increased to 24 percent from 16 percent. On the other hand, the share of Arab Group has decreased to 22 percent from 25 percent during the same period.

In the early 1990s, the share of agriculture sector in OIC’s total GDP was around 16 percent, but has dramatically declined to 12 percent in the following decade. As of 2014, it reached 10 percent which is more than two times higher than the share of agriculture sector in the world’s total GDP.

Figure 2: Share of Agricultural GDP in Total GDP by Sub-Regions



Source: COMCEC Agriculture Outlook 2016

Even though the relative contribution of agricultural activity to the economy has shown fluctuations in African Countries, it depicts a declining path in both Arab and Asian Countries. In this regard, the African Group has the highest share of agricultural GDP, which accounted for 21.5 percent in 2014. It is followed by the Arab and the Asian Groups with 11.5 percent and 5.3 percent, respectively (Figure 2).

As many of the developing countries, agriculture sector is a significant source of employment. The number of people employed in the agriculture sector in the OIC Member Countries reached 240 million in 2013, which accounts for the 18 percent of world's agricultural employment. In 1990, OIC agriculture sector employed almost 182 million people, where total employment was 344 million. Up to 2013, 58 million agricultural labor was added, and the number of people employed in agriculture sector reached 240 million people. In the same year, total employment in the OIC Member countries was realized as nearly 670 million people (Figure 3).

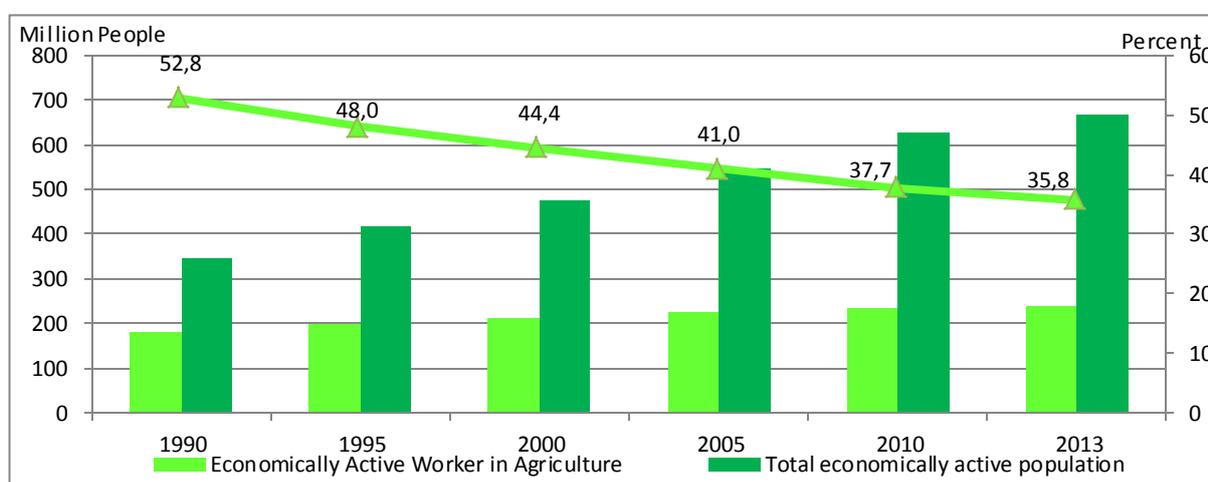
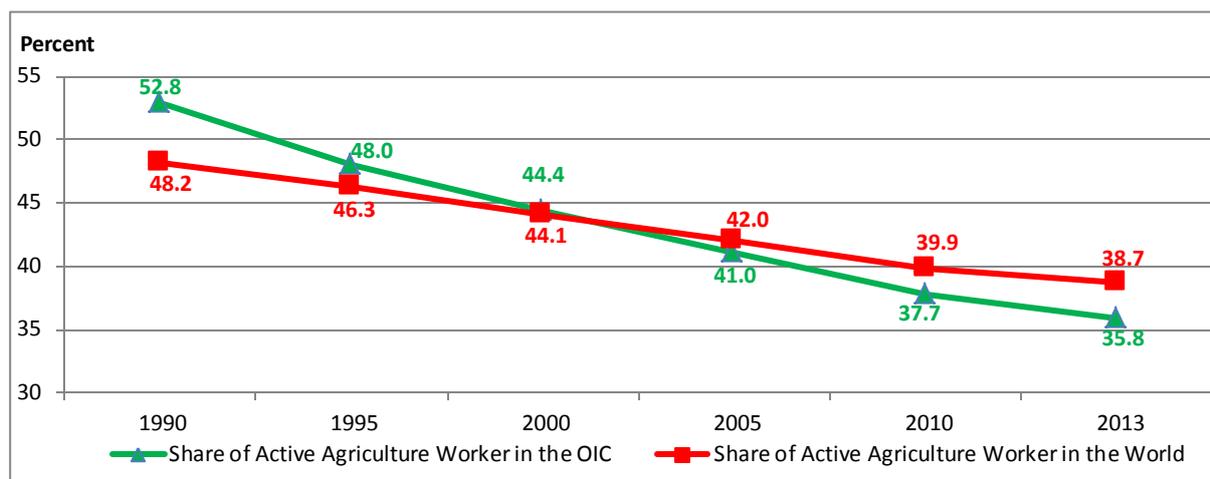


Figure 3: Agricultural and Total Employment in the OIC

Source: COMCEC Agriculture Outlook 2016

On the other hand, despite the fact that the number of agriculture sector employment is getting higher, the proportion employed in agriculture is decreasing over time. In 1990 Agriculture accounted for almost 52.8 percent of total employment in the OIC, which is higher than the share of the World's agricultural employment. At the beginning of the 2000s, the contribution of agriculture sector to the total employment decreased to around 44 percent both in the OIC and world. After that, the share of agriculture sector in the OIC total employment is getting lower than the world. In 2013, the proportion of agricultural employment realized as 35.8 percent in the OIC and 38.7 percent in the world (Figure 4).

The decline in the volume of agricultural employment can be explained by the biological, chemical, and mechanical advances, eliminating many plantation, cultivation and harvesting tasks. These advances have also resulted in increased agricultural productivity, rapid urbanization, and non-farm activities, providing an increasingly important share of rural income.

Figure 4: Share of Agricultural Employment in the OIC and the World

Source: COMCEC Agriculture Outlook 2016

Main Challenges of the Agriculture Sector in the OIC Member Countries

The majority of the OIC Member Countries are not self-sufficient in terms of food production and considerably depend on import of agricultural products. Besides, OIC agricultural production is mainly concentrated in a limited number of Member Countries, namely Indonesia, Nigeria, Turkey, Pakistan, Iran, Egypt, Malaysia, Bangladesh, Sudan and Algeria. More than 75 percent of the total agricultural products are produced by these Member Countries. In addition, millions of people in the OIC Member Countries suffer from food shortages and do not have access to sufficient food.⁴

The agriculture sector in the OIC Member Countries has mainly been suffering from, among others:

- Low agricultural productivity;
- Lack of institutional framework to provide necessary adjustments for a more efficient and productive agriculture sector;
- Inadequate public sector investments in infrastructure;
- Lack of private sector investments in farming and agribusiness enterprises;
- Lack of sustainable natural resource management (land, water, fisheries and forests);
- Post-harvest losses.

Reducing Post-harvest Losses in the World

The level of food losses and waste in edible food products in different commodity groups (cereals, roots and tubers, oilseeds and pulses, fruits and vegetables, meat, dairy products, fish and seafood) differs in the various regions of the world. According to the FAO, 32 percent (approximately 1.3 billion tonnes) of the food produced in the world for human consumption every year gets lost or wasted. The economic value of mentioned food losses and waste amounts to roughly 680 billion USD in industrialized (developed) countries and 310 billion USD in developing countries. In terms of physical losses, industrialized (developed) and developing countries have a similar level of losses, 670 and 630 million tonnes respectively. The level of the global, in terms of quantitative losses, food losses and waste per year differ

⁴ Ibid.

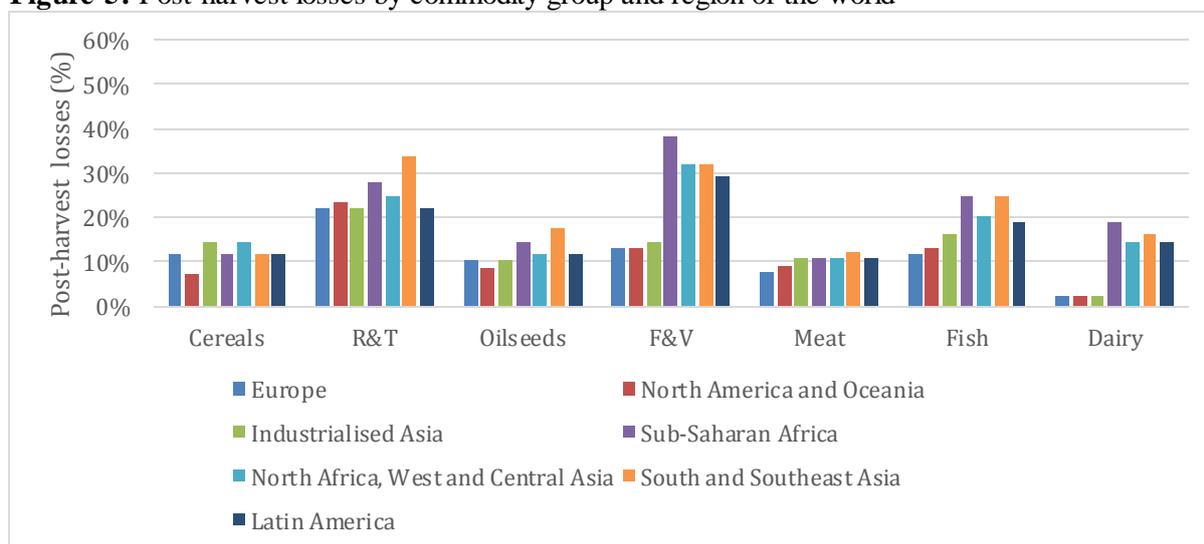
according to the food groups. Fruits and vegetables, and roots and tubers have the highest wastage rates of any food at 40-50 percent. As for fish, it is 35 percent, cereals 30 percent and 20 percent for oil seeds and pulses, meat and dairy products⁵.

Food losses and waste occur in different stages of the agricultural supply chain with different categorizations. There are five main stages of the food chain where food losses and waste can occur:

- **Production losses:** on-farm cultivation practices, harvesting
- **Post-harvest handling:** sorting, grading, trimming, packing, cooling, and storage losses
- **Processing losses**
- **Distribution losses:** transport, shipping to markets, marketing
- **Consumer waste:** home consumption discards or food service waste

Post-harvest food losses, for different commodity groups and regions of the world show varying trends. In this respect, Cereals and Oilseeds and Pulses have the lowest overall losses, ranging from 9 to 18 percent, and these commodity groups have lower level of losses in the industrialized (developed) countries, which are located in Europe, Industrialized Asia and North America and Oceania, compared to the Low and Middle Income Countries (LMICs) which includes Northern Africa, West and Central Asia, Latin America, Sub-Saharan Africa and South and Southeast Asia. Post-harvest losses are generally higher, especially in the LMICs, for Fruit and Vegetables, Fish and Seafood Products and Dairy. Furthermore, the level of losses for Dairy products, in developing countries, is remarkably high, compared to the developed ones. Regarding Root and Tuber Crops, losses are higher, but the difference between Industrialized (developed) and LMICs is not big (Figure 5).

Figure 5: Post-harvest losses by commodity group and region of the world



Source: *Reducing Post-harvest Losses in the OIC Member Countries, 2016*

⁵ Reducing Post-harvest Losses in the OIC Member Countries, 2016 p. 3

Reducing Post-harvest Losses in the OIC Member Countries

Researches indicate that mainly three types of loss occur during the post-harvest period, namely physical, economic and quality/nutrition losses in the OIC Member Countries. Post-harvest losses and the main causes behind these losses are complicated. These losses can occur in all commodity groups. On the other hand, losses tend to be specific to each crop and probably to the specific value chains for a particular commodity group. For instance, for cereals, physical losses tend to be related to harvesting, drying, transport, threshing and shelling, sorting, marketing and storage, as these are the major processing and operation steps for this commodity group, while for fruits and vegetables, it is poor packaging and transport.

Post-harvest economic losses are more difficult to quantify. But they, in all cases, are related to the commodity group, the specific value chains and where in the value chains the losses occur. Economic losses are more severe when they occur at the consumer level, especially for higher value commodities such as meat and meat products, dairy and dairy product and fish and seafood products. Nutrition and quality losses are also scantily reported on, even in the field and desktop studies. Post-harvest food losses can have long-reaching impacts on production, consumption, food security, the environment, and food safety (Table 1).

Table 1: Long-standing impacts of Post-harvest Losses in the OIC Member Countries

Long-standing impacts of Post-harvest Losses in the OIC Member Countries	
Effects on Production	<ul style="list-style-type: none"> Income losses for producers and farmers Import of raw materials used in food production could lead to increased stress on foreign exchange Increased cost of production can lead to higher consumer prices Post-harvest food losses can result in yield gaps due to shortfalls in plant or animal nutrition, water management and pest management in the OIC Member Countries.
Effects on the value chain	<ul style="list-style-type: none"> Most of food processing in the OIC Member Countries is either from raw food materials produced by the domestic market or from imports. Therefore, the final products are either consumed locally or increasingly exported. Thus, Post-harvest food losses can lead to sub-optimal value chains in the Member Countries.
Effects on Food Security	<ul style="list-style-type: none"> Post-harvest processing can result in lost calories and lowered nutrition for consumers in the OIC Member Countries, which immediately reduces food security for the community, particularly, householders and small scale producers. Post-harvest food losses make these groups more vulnerable to seasonal fluctuations in food supply since food is lost and less income is obtained.
Effects on the Environment	<ul style="list-style-type: none"> Post-harvest food losses can place direct burden on the environment though either the incorrect disposal of waste leading to pollution and odour or in waste disposal costs.
Effects on Food Safety	<ul style="list-style-type: none"> In food processing and production, where any food which is unsafe is part of a batch, lot or consignment of food of the same class or description, it can be presumed that all the food in that batch, lot or consignment is also unsafe. In these instances, Post-harvest food losses can increase, leading to increased costs to the consumer and losses in income for the producer.

Source: *Reducing Post-harvest Losses in the OIC Member Countries, 2016*

In order to minimize the negative impacts of the post-harvest losses in the Member Countries, different international institutions as well as foundations are funding a number of international projects and programs. Therefore, the current status and availability of resources that are presently mobilized to reduce Post-harvest losses in the OIC Member Countries has varied widely by the region, key crops and by value chain.

Efforts under the COMCEC

- **Eighth Meeting of the Agriculture Working Group**

Given the importance of food losses, the COMCEC AWG has devoted its three meetings to different dimensions of this topic, namely: On-Farm Food Losses, Post-Harvest Losses and Food Waste in the OIC Member Countries.

In this respect, the 7th Meeting of the Agriculture WG was held on March 3rd, 2016 with the theme of "Reducing On-Farm Food Losses in the OIC Member Countries". An analytical report on "Reducing On-Farm Food Losses in the OIC Member Countries" was submitted to this Meeting. The WG has discussed the subject and come up with the following policy recommendations:

1. Identifying the knowledge and information gaps regarding the levels and specific causes of on-farm food losses for key crops and food products with a view to providing solutions for each OIC Member Country.
2. Improving/developing agricultural extension, training and outreach activities for reducing on-farm food losses.
3. Developing specific programs/projects to address on-farm losses in agricultural value chains in cooperation with the relevant OIC Institutions.

The Proceedings of the Meetings and the presentations made during the Meetings are available on the COMCEC web page (www.comcec.org).

Furthermore, the 8th Meeting of the Agriculture Working Group was held on October 13th 2016, in Ankara, Turkey with the theme of "Reducing Post-Harvest Losses in the OIC Member Countries". The Representatives of the Member States have shared their experiences, achievements and challenges in reducing post-harvest losses in their respective countries. The Meeting has considered the Studies "Reducing Post-Harvest Losses in the OIC Member Countries" commissioned by the COMCEC Coordination Office and the "COMCEC Agriculture Outlook 2016" prepared by the COMCEC Coordination Office. The Meeting has come up with a set of policy recommendations:

1. Setting up national postharvest losses reduction coordination committees with a view to identifying, prioritizing and sharing postharvest losses data and practices across a range of strategic commodities and raising awareness on postharvest losses
2. Mobilizing agricultural finance providers to allocate more financial resources with a view to addressing agricultural infrastructure investment needs in postharvest losses
3. Improving and developing agricultural extension, training and outreach research activities for reducing postharvest losses

Lastly, 9th Meeting of the Agriculture Working Group will be held on February 23rd, 2017, in Ankara, Turkey with the theme of "Reducing Food Waste in the OIC Member Countries".

- **COMCEC Project Funding (PCM)**

The member countries having registered to the Agriculture Working Group and the OIC Institutions working in the economic domain can propose multilateral cooperation projects within the framework of the COMCEC Project Funding, which is another important implementation instrument of the Strategy.

Within the framework of the third project call, four projects proposed by Iran, Palestine and Turkey have been implemented successfully. Project titles and brief information about the projects implemented in 2016 are as follows;

- Iran implemented the project on “Rural Household Empowerment on Management of Production, Supply and Market Access” with the participation of Azerbaijan and Turkey. The project aims to facilitate and build market access capacities of small-holder farmers producing Good Agriculture Products (GAP).
- The project titled “Improving Small Ruminates Productivity by using different technologies as silage, feed block and hydroponic in Palestine, Jordan and Tunisia” was implemented by Palestine with three partner countries, namely, Palestine, Jordan and Tunisia. The purpose of the project is to improve small ruminates productivity, through applying new technology in alternative feeding systems.
- Turkey implemented a project titled “Establishment of Database, Network Connection and Web Pages of Small holders/Family Farmer’s Agricultural Cooperatives between OIC Member States” with the participation of 25 Member Countries. The project aims at building a portal in order to provide a platform to increase trade and cooperation among member countries, especially in trade of agri-food products produced by small-scale farmers.

Moreover, under the fourth Project Call made in September 2015, the following three projects proposed by Iran, Palestine and Turkey are being implemented in 2016.

- Rural Household Empowerment on Management of Production, Supply and Market Access (Proposed by the Islamic Republic of Iran).
- Improving Small Ruminates Productivity by using different technologies as silage, feed block and hydroponic in Palestine, Jordan and Tunisia. (Proposed by Palestine)
- Establishment of Database, Network Connection and Web Pages of Smallholders/ Family Farmer’s Agricultural Cooperatives between COMCEC Member States. (Proposed by Turkey)

Regarding the ongoing cooperation activities in this cooperation area;

- As of November 2016, 7 Ministerial Meetings on Agriculture have been held, and the 7th Ministerial Meeting on Agriculture was held on 26 - 28 April 2016 in Astana, Kazakhstan.

