



Central Asia Insights **Agriculture**

June 2018

What is Central Asia Insights?

- The Central Asian Insights series aim to provide investors, policymakers and academia with a snapshot of the state and recent developments in various sectors of the Central Asian economy.
- These snapshots usually include a collection of relevant facts and figures, followed by concise analysis thereof. In certain instances, we provide a more in-depth discussion when the information and conclusions so require.
- As such the Insights provide comprehensive snapshots of the most important indicators in various sectors. These indicators provide for a given sector an accurate understanding of its importance, production structure, efficiency and international relevance.
- The data used in these snapshots originate from various publicly available sources including the official statistics and databases of international organizations. This report predominantly employs the data provided by national official agencies, Food and Agriculture Organization (FAO) and the World Bank database.
- In these snapshots, the term Central Asia (CA) refers to five former Soviet Union Republics – Kazakhstan (KZ), Kyrgyzstan (KG), Tajikistan (TJ), Turkmenistan (TM) and Uzbekistan (UZ).

Climate

- The climate in CA ranges from bitterly cold in the mountainous regions to extremely hot and dry in the deserts, a factor which is further exacerbated by a lack of large water shoreline. All five of the countries in CA are landlocked. As Uzbekistan is double landlocked, its geographical location determines its sharply continental climate. One of the region's characteristic features is significant differences in the daily and seasonal temperatures, a factor caused by high solar radiation and relatively low humidity. Although humid winds often strike this area, the mountains trap most of the moisture, with little rain falling in the Aral Sea basin that straddles all five countries.
- Average temperatures range from 0 to -40°C in January to 28 to 32°C in July. In some areas, such as Karakum in Turkmenistan, summers can be as hot as 52°C . Winters can be as cold as -16°C , with an absolute lowest of -38°C . This makes the overall climate extremely contrasting.
- In terms of volume, the average annual precipitation in CA is estimated to be 1056 km^3 , with a regional average depth of 263 mm/year. This can be compared to a global average of 812 mm/year, with significant differences between and within countries. At the country level, the driest country is Turkmenistan, with an average of 161 mm/year. The wettest is Tajikistan, with 691 mm/year. Annual precipitation in the lowlands and valleys is between 80 and 200 mm, concentrated in winter and spring, whilst precipitation in the foothills ranges from 300 to 400 mm. On the southern and southwestern sides of the mountain ranges, this figure is between 600 and 800 mm.

Water Resources

- In CA, the average annual internal renewable water resources (IRWR) account for 194 km³, representing 0.6% of the world's total IRWR. Geographically, the region accounts for around 3% of global landmass. In absolute terms, Kazakhstan accounts for the largest amount of IRWR, with 64 km³/year or 33% of the region's water resources. Tajikistan follows with 63 km³ or 32% of the region's water resources, which is significant as the country's territory represents only 3% of the total area of the region.
- Uzbekistan covers almost 11% of the region and accounts for 8.3% of the region's water resources, with an average precipitation volume of 16 km³/year and a depth of 37 mm. Turkmenistan represents 12% of the region but has the least water resources, with 1 km³/year and a depth of 3 mm, accounting for less than 1% of CA's water resources

Average annual renewable water resources in 2015. Source: Authors' calculations from FAO database (2018)

Country	Annual precipitation		Annual renewable water resources					Dependency ratio
			Internal (IRWR)			Total actual		
	depth	volume	depth	volume	per inhab (2015)	volume	per inhab (2015)	
	mm	km ³	mm	km ³	m ³ /inhab	km ³	m ³ /inhab	
Kazakhstan	250	681.2	24	64.3	3651	108.4	6150	41
Kyrgyzstan	533	106.6	245	48.9	8237	23.6	3976	1
Tajikistan	691	97.6	445	63.4	7482	21.9	2582	17
Turkmenistan	161	78.5	3	1.4	261	24.7	4609	97
Uzbekistan	206	92	37	16.3	546	48.9	1635	80
Central Asia	263	1055.9	48	194.3	2886	-	-	-

- The Amu Darya river in the south and the Syr Darya river in the north are two major river basins in the Aral Sea basin. The third, the Tedzhen-Murghab basin, is located in the southwest. Some thirty primary tributaries feed the basins. However, today many of the tributaries only flow seasonally, drying up before reaching the main rivers. The main rivers originate in mountainous regions, specifically in the Pamir and Tien Shan ranges.
- The Amu Darya (known also by its ancient name as Oxus River), is the largest river in Central Asia and is shared by six countries: Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. Starting in the Pamir Mountains, the Amu Darya flows 2540 km, mainly west-northwest, from the headwaters of the Panj to the Aral Sea. The river is named Amu Darya from the point where the Panj river joins the Vakhsh river in the Pamir mountains.
- The Syr Darya is the longest and second-most important river in CA in terms of water resources. Formed by the confluence of the Naryn and Karadarya rivers in the eastern Fergana Valley, it flows 3019 km northwest until it empties into the Aral Sea. The river is known as the Syr Darya after the point where the Naryn joins with the Karadarya in Uzbekistan. Glaciers and snowmelt feed the river. The water regime is characterised by a spring-summer flow that begins in April. Discharge is highest in June.

Dams of Central Asia. Source: Authors' calculations from FAO database (2018)		
Country	Dam capacity	
	km³	% of region
Kazakhstan	79.9	50
Kyrgyzstan	23.5	15
Tajikistan	29.5	18
Turkmenistan	6.2	4
Uzbekistan	22.2	14
Central Asia	161.3	100

- The total long-term average annual runoff of the Syr Darya basin is 36.57 km³. About 27.42 km³ or 75% is formed in Kyrgyzstan. A total of 22.33 km³ of this is secured by intergovernmental agreements (the 1992 Agreement between five Aral Sea Basin States - Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, on water sharing, which establishes the Interstate Commission for Water Coordination for Amu and Syr Darya).
- Mountains and glaciers play an important role in water storage. They can store precipitation as snow and ice in winter and deliver it as snowmelt to rivers and associated alluvial aquifers during the dry summer season of July and August.

- The region's total dam capacity is 161.3 km³, half of which is in Kazakhstan. There are fifteen dams that have a capacity greater than 1 km³: six in Uzbekistan, four in Kazakhstan, two in Turkmenistan, two in Tajikistan, one in Kyrgyzstan and one in Afghanistan. Most of these dams serve multiple purposes and are used simultaneously for hydropower production, irrigation, water supply and flood control. In total, these 15 large dams account for 129.4 km³ or 80% of the total dam capacity in CA. The Bukhtarma dam in Kazakhstan was completed in 1960 and is the largest in the Aral Sea basin, with a capacity of 50 km³.
- The total annual water withdrawal for the CA region is around 125 km³, representing 3.5% of world withdrawals. Of the five countries, Uzbekistan has the highest withdrawal, accounting for 39% of the total for the region. This is because it has the largest irrigated area, representing 2–4 times the area irrigated in the other four countries. About 89% of the inventoried withdrawal is water withdrawn for the purpose of agriculture, a figure that is higher than the global agricultural water withdrawal (69%). Water withdrawal in the agricultural sector (crops and livestock) accounts for more than 90% of total water withdrawal in all countries except for Kazakhstan, where the figure stands at 66%.
- Irrigation is an ancient practice in CA that dates back to the 5th century B.C. The region's current irrigation infrastructure is among the most complex in the world, particularly in Uzbekistan. It relies on a system of dams, pumps and canals. The Tuaymuyun dam comprises nine structures and four reservoirs, mostly located in the territory of Turkmenistan. However, ownership of the Tuaymuyun structures was granted to Uzbekistan through the Water Management Partnership Agreement signed by both countries in 1996.
- The total area equipped for irrigation in the CA countries covers 9.12 million ha and accounts for 3% of the world's irrigation. This is only 3 million ha less than the area equipped for irrigation in all 54 African countries combined. Full control irrigation is a far more widespread form of irrigation in the region, accounting for 93% of the area equipped for irrigation. In Kazakhstan, only 866,300 ha is reported to be spate irrigated.
- IRWR of less than 1700 m³/inhabitant is considered to be the threshold below which there are indications of water stress. Turkmenistan and Uzbekistan account for only 275 m³ and 589 m³ per inhabitant respectively. However, looking at the total renewable water resources (including external), all have more than 1700 m³/inhabitant because they have a relatively large proportion of external water resources.
- Water scarcity forces national economies to find alternative ways to satisfy the demand for water. Other sources of water may include:
 - fossil groundwater;
 - overexploitation of renewable groundwater;
 - secondary freshwater (e.g. treated wastewater, agricultural drainage water);
 - non-conventional sources of water (e.g. desalinated water).

- Water and irrigation management is considered to be a key factor in the use and conservation of water resources for all CA countries. Future agricultural water management policy in this region will consider:
 - Rehabilitation and modernization of the irrigation and drainage infrastructure;
 - Increase of water use efficiency and productivity;
 - Introduction of crops requiring less water;
 - Rehabilitation of dams and construction of new dams only in selected strategic locations and properly negotiated among the riparian countries;
 - Reuse of water;
 - Desalination;
 - Integrated water resources management;
 - Flood and drought contingency plans;
 - Water saving measures in all sectors and appropriate measures for developing new additional land and water resources.

Land Resources

- **Kazakhstan.** Kazakhstan, as the largest country by area (almost 270 million ha), also has the largest agricultural area in CA. In 2015, 80% or 217 million ha was devoted to agriculture. The total area equipped for irrigation is estimated to represent only 1% of the country's total area. Permanent pastures cover almost 70% of Kazakhstan, with cultivable areas representing 13.6% of the agricultural area, 29.4 million ha of which is used for growing temporary crops, meadows and pastures. Only 132,000 ha of these areas are used for permanent crops. Farms in Kazakhstan are divided into three categories: agricultural enterprises, private (or peasant) farms and subsidiary household plots. Agricultural enterprises, which account for the majority of grain production, tend to be large-scale operations (similar to the state and collective farms of the Soviet era). In 2015, private (peasant) farms cultivated around 40% of arable land in Kazakhstan. Along with the individualisation of land usage, the privatisation of the legal ownership of land was also introduced. However, large agricultural enterprises continue to hold a high proportion of arable land in Kazakhstan.
- **Kyrgyzstan.** The proportion of total land area used for livestock rearing and the production of crops is estimated to be 55.08%, or 33.8 million ha, and permanent meadows and pastures represent 87.01% of this. In 2015, 1.3 million ha of cultivated area was used for temporary crops and 75,200 ha for permanent crops. In Kyrgyzstan, the individualisation of land tenure occurred very quickly. Dominance has shifted from agricultural enterprises to peasant farmers, with the former holding only 24% of arable land in 2015. Just like in Kazakhstan, land in Kyrgyzstan can be owned by individuals as the country legally recognises the private ownership of agricultural land.
- **Tajikistan.** The total area of Tajikistan is over 13 million ha, only 34.19% of which is allocated for livestock rearing and crop production. Permanent meadows and pastures cover 3.9 million ha. In 2015, the total cultivated area was an estimated 870,000 ha. Approximately 730,000 ha were used for temporary crops such as wheat and cotton, while 140,000 ha were used for permanent crops. Land tenure individualisation began after the collapse of the Soviet Union and, in 2010, the proportion of arable land under individual use increased from 7% to 86%. However, private land ownership is not recognised in Tajikistan; all land is owned by the state and an area is given to households and peasant farmers through various lease or rental arrangements.

- **Turkmenistan.** In Turkmenistan, out of a total land area of 47 million ha, 72% of land was used for agriculture in 2015. However, only around 6% of the agricultural land is suitable for irrigation. The arable land and permanent crops area is estimated at 4.26% of the total land area. In 2015, 1,940,000 ha was comprised of arable land, and 60,000 ha was permanent (mostly for the cultivation of grapes, pistachios, figs and olives. According to the 2004 Land Code, Turkmenistan formally recognises private land ownership. Around 10% of land is privately owned (European Bank, 2006). However, in practical terms there is no difference between private farmers who get land in use rights and those who receive a “land ownership certificate” from the state. They have an asset that they can use, but not dispose of in any way.
- **Uzbekistan.** The total area of Uzbekistan is more than 42 million ha, 62.93% of which was under agricultural usage and 51.725% of which was under permanent meadows and pastures in 2015. Only 16% of agricultural land, equal to an estimated 4.4 million ha, is capable of being ploughed temporarily and permanent crops occupy less than 1% of total land area. Thanks to a shortage of water, the total area equipped for irrigation is only 10% of total land area. Since Uzbekistan gained independence, the proportion of arable area holding per household has not changed noticeably. However, by 2015, agricultural enterprises held less than 2% of arable land. Their large share in arable land (more than 65%) had been replaced by peasant farmers over the previous two decades. However, in Uzbekistan all land remains owned by the state and is transferred to farmers in use rights.

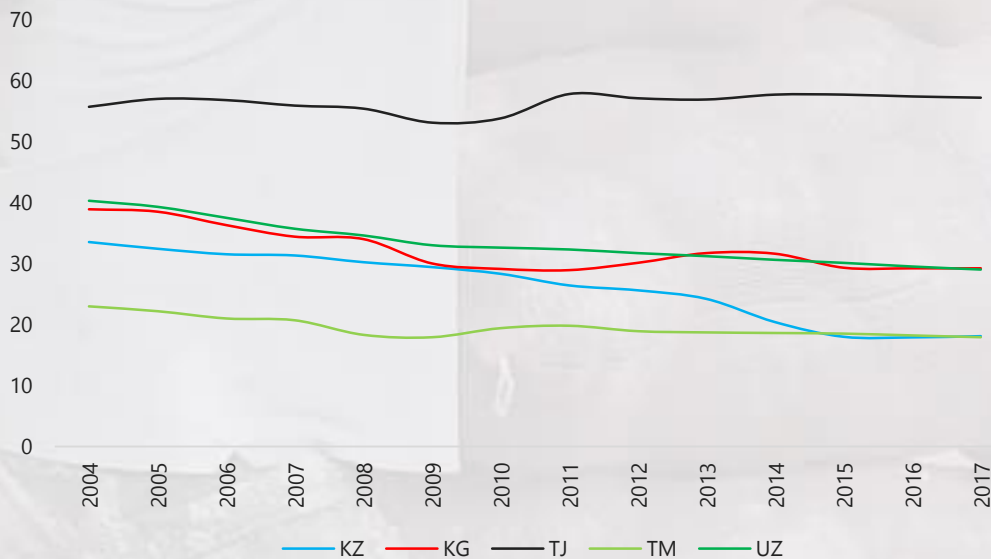
Land use in Central Asia (thousand ha) in 2015. Source: FAO database (2018)

	Total area	Total area equipped for irrigation	Agricultural area			
			Permanent meadows and pastures	Arable land	Permanent crops	Total
Kazakhstan	269970	2061.42	187465	29395	132	216992
	100%	1%	69.44%	10.89%	0.05%	80%
Kyrgyzstan	19.180	102.98	9201.3	1280.6	75.2	10557.1
	100%	1%	47.97%	6.68%	0.39%	55%
Tajikistan	13.878.6	742.12	3875	730	140	4745
	100%	5%	27.92%	5.26%	1.01%	34%
Turkmenistan	46.993	1996.44	31838	1940	60	33838
	100%	4%	67.75%	4.13%	0.13%	72%
Uzbekistan	4254.0	4216.28	22000	4400	370	26770
	100%	10%	51.72%	10.34%	0.87%	63%

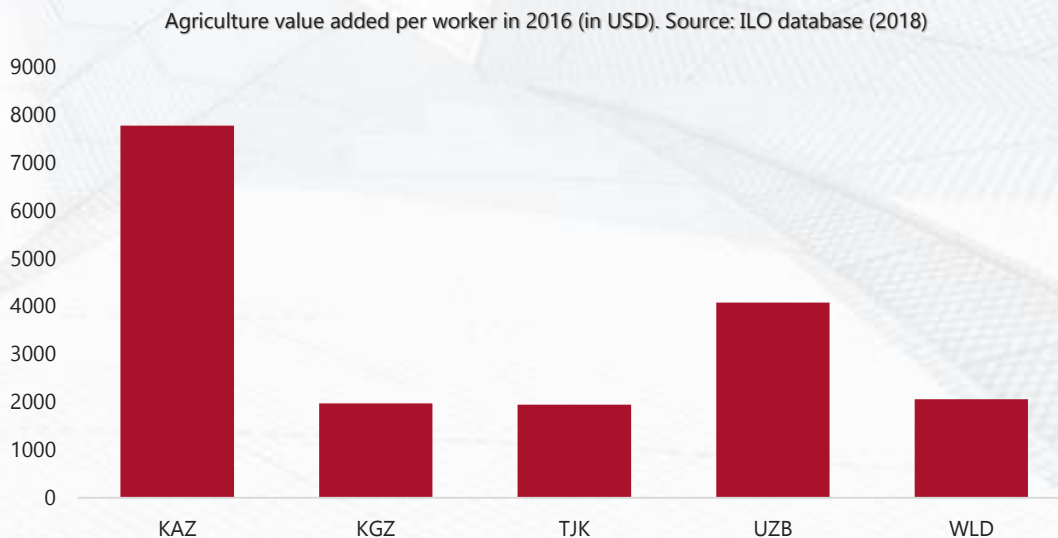
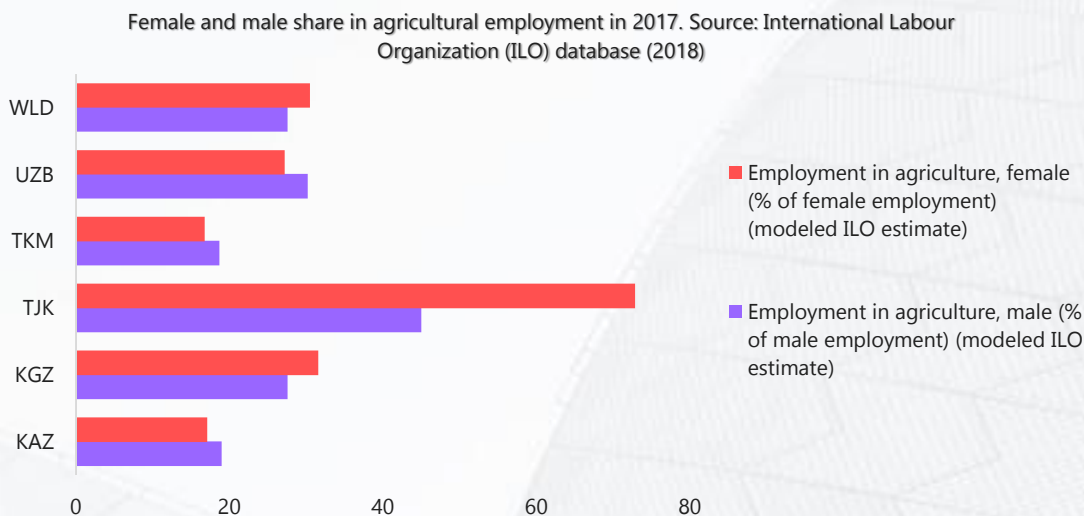
Employment

- With the exception of Tajikistan, the share of the labour force employed in agriculture has been in constant decline in all CA countries since the 1990s. Employment takes the form of:
 - wage employment in corporate farms;
 - self-employment in private peasant farms;
 - hired labour by other farmers' peasant farms; and
 - self-employment in household plots.
- According to official statistics, the total number of people employed in agriculture in Tajikistan was an estimated 1.9 million (57.2% of the total employed population) in 2017, with 72.3% of these people female. In Kyrgyzstan and Uzbekistan, the share of the economically active population employed in agriculture was 29%. In Kyrgyzstan, women are more active in the agricultural sector compared to in Uzbekistan.
- In Turkmenistan and Kazakhstan, the proportion of the population employed in agriculture is smaller due to the smaller share of the rural population, accounting for nearly 20% of the economically active population.

Employment in agriculture in Central Asia, % of total employment. Source: World Development Indicators (WDI) (2018)



- The share of female employment in agriculture in CA is highest in Tajikistan and Kyrgyzstan. Nearly 75% of Tajik women work in agriculture, compared to just 45% of men. Such patterns in employment are the result of the high rate of migration amongst Tajik men to neighbouring Kazakhstan and Russia. Considering that both countries are highly dependent on remittances, nearly 1 million Tajik and Kyrgyz men travel abroad in search of employment every year, whilst the women fill this gap in agriculture.
- Agricultural labour productivity is measured against the constant base of USD 2010, and shows agricultural value added per worker in the agricultural sector in 2016. Figure below reveals that Kazakhstan has the highest labour productivity in agriculture across the region, with almost USD 8000 per worker. This is then followed by Uzbekistan at USD 4000, Kyrgyzstan at USD 1968 and Tajikistan at USD 1938. Compared to global averages, labour productivity in agriculture is higher in Uzbekistan and Kazakhstan and lower in Tajikistan and Kyrgyzstan.



Crops

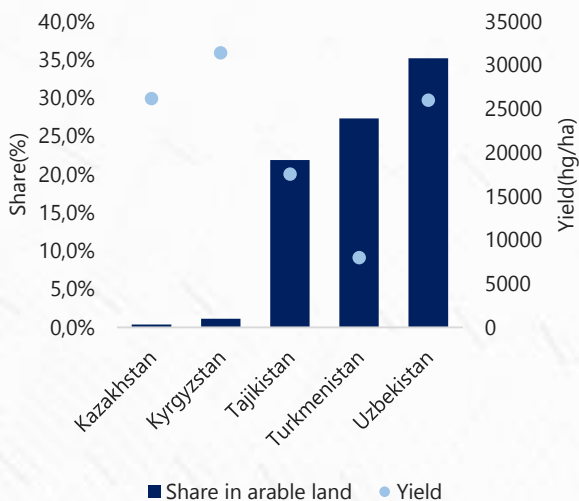
- A country's agricultural output combines both the rearing of livestock and the cultivation of crops. In Kazakhstan, Tajikistan and Uzbekistan, crop cultivation plays a dominant role in agriculture. The most important products are cotton, wheat, rice, fruits and vegetables. Kazakhstan is one of the world's largest grain exporters, mainly exporting spring wheat, whilst Uzbekistan was the fifth-largest cotton exporter in 2016-2017.
- There are three types of most commonly produced crops across all CA countries: cotton, wheat and rice.

Salient information about dominant cropping systems in five CA countries according to agro-ecological zones in 2013. Source: FAO database (2018)

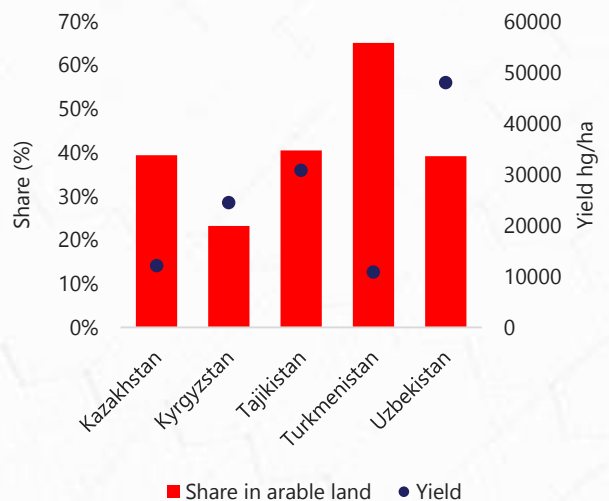
Country/region	Major production system	Cropping intensity (%)	Growth period (days)	Distinguished features of the agro-ecology	Production constraints
Kazakhstan (northern parts)	Rainfed spring wheat–fallow systems	60–80. rainfed	210–240	Rainfed cereal systems, steppes, long cold winters	Drought, cold and water stress (precipitation 300–400 mm), soil erosion
Kazakhstan (southern parts)	Extensive cereal–livestock systems, irrigated cotton/ wheat-based systems, rice, rangelands	50–60. rainfed	30–89	Rainfed rangelands with mixed crop–livestock systems, high Mg-soils, saline groundwater	Drought, cold and water stress (precipitation 250–350 mm), 12–14°C. Mg-soil. erosion
Kyrgyzstan (Osh. Chu and Fergana Valley)	Irrigated agriculture on sloped and valley areas	40–60 or more	60–119	Sloped lands (up to 10%), supplemental irrigation, generally fresh but shallow groundwater table	Drought and heat (precipitation 200–300 mm), saline water use, 16–22°C
Tajikistan (South West/North West)	Irrigated systems (cotton–wheat) agric. on sloped land of 5–16%	40–60 or more	60–150	Pastoral systems/irrigated agriculture on sloping lands, saline groundwater	Drought (precipitation 250–350 mm). 7–9°C. sloped land, mechanization. Water erosion by irrigation. drainage congestion
Uzbekistan (irrigated)	Irrigated cropping systems. cotton–wheat (mostly furrow irrigation)	More than 60	60–119	Irrigated crop production. drainage water use. soil salinity. long growing season. double cropping	Drought and heat (precipitation 250–500 mm). 16–20°C. salinity. water erosion
Turkmenistan (irrigated)	Rainfed pastoral/cereal production systems (mostly furrow irrigation)	30–60	30–59	Crop–livestock systems. saline groundwater. overgrazing. soil salinity	Drought and heat (precipitation 200–350 mm). 14–18°C. water scarcity. salinity

- Since the collapse of the Soviet Union, cotton has remained a strategic agricultural commodity for Tajikistan, Turkmenistan and Uzbekistan, where the land area allocated for cotton cultivation accounts for around 20%, 25% and 35% of total arable land respectively. In Turkmenistan and Kazakhstan, on the other hand, only 1% of arable land area is allocated for cotton production.
- In all countries in the CA region, the cotton industry relies on cheap rural labour during harvesting seasons. In terms of productivity, cotton yields are highest in Uzbekistan, followed by Kazakhstan and Kyrgyzstan.
- Figure below reveals that wheat represents one of the most important agricultural crops for Turkmenistan and Kazakhstan. Kazakhstan, as the largest wheat producer in the region, is also the only net exporter of wheat to both Central Asia and the rest of the world. Despite the fact that Turkmenistan allocates the highest share of its arable land to wheat production (70% or 1.5 million ha), in absolute terms Kazakhstan allocates much more arable land to wheat cultivation (more than 12 million ha).
- Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan are net importers of wheat. Kyrgyzstan, Turkmenistan and Uzbekistan are yet to reduce their wheat import dependency on Kazakhstan, and have increased land allocated for wheat production (Mogilevskii & Akramov, 2014).
- In terms of wheat yield per hectare, Uzbekistan has the highest levels of productivity with approximately 5 tonnes per hectare. This is followed by Tajikistan, Kyrgyzstan, Kazakhstan and Turkmenistan.
- Such stark differences in wheat yields are associated with the degree of irrigated wheat cultivation versus rain-fed wheat cultivation. In Uzbekistan and Tajikistan, almost 100% of wheat is cultivated on irrigated land, whereas rain-fed wheat dominates in Kazakhstan.

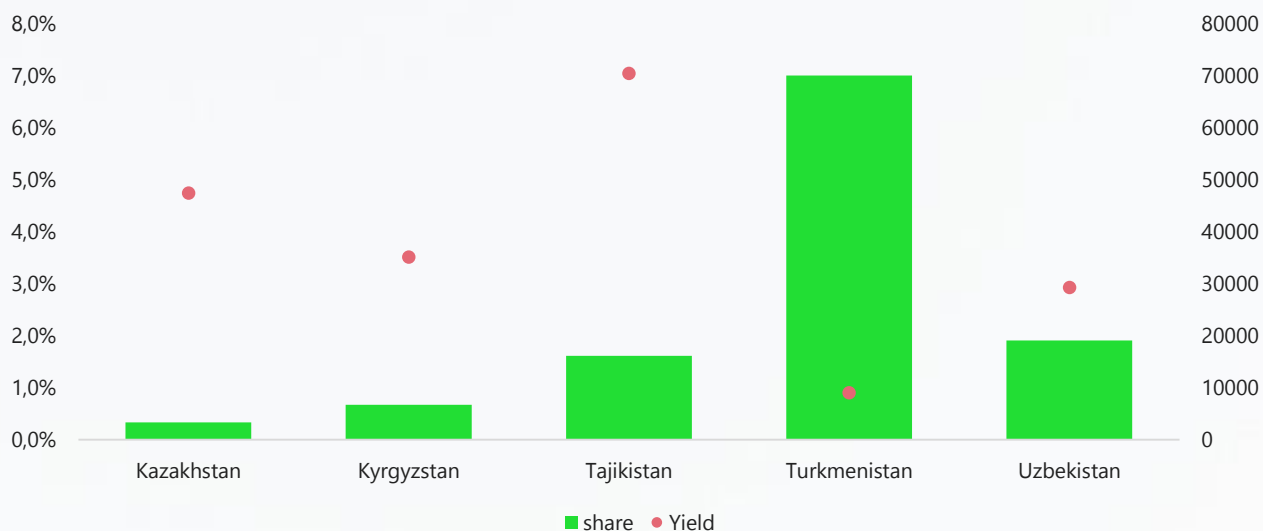
Cotton production in Central Asia, in %. Source: FAO database (2018)



Wheat production in CA, in %. Source: FAO database (2018)



Rice production. Source: FAO database (2018)



- In the case of rice, Tajikistan the dominant producer as rice is cultivated on 7% of arable land. In contrast, the rest of the CA countries allocated less than 2% of their arable land to rice production. In 2016, Turkmenistan harvested the most on average, with 70,000 kg rice per hectare. Since Turkmenistan's yield statistics are so much higher than those of its neighbours, international organisations and independent researchers have questioned its validity, suspecting yield manipulation (FAO, 2012, Turkmenistan – Agricultural Sectoral Review, pp.17-18 <http://www.fao.org/3/a-i2911e.pdf>).

Comparative statistics of major crops in CA countries. Source: FAO database (2018)

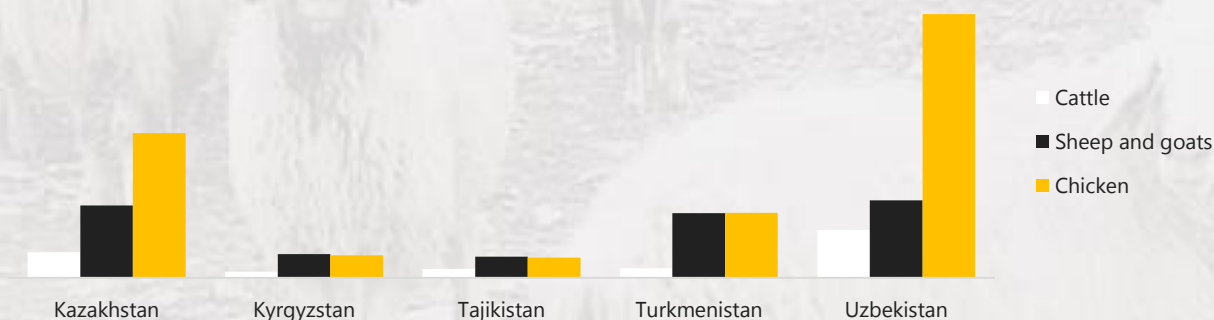
	Kazakhstan		Kyrgyzstan		Tajikistan		Turkmenistan		Uzbekistan	
	Yield (kg/ha)	Area (1000 ha)	Yield (kg/ha)	Area (1000 ha)	Yield (kg/ha)	Area (1000 ha)	Yield (kg/ha)	Area (1000 ha)	Yield (kg/ha)	Area (1000 ha)
Cotton	26.159	110	31.415	17	17.514	163	7.963	540	25.999	1.272
Wheat	12.111	12.373	24.461	270	30.828	297	10.831	1.477	47.988	1.446
Rice. paddy	47.480	94	35.185	10	70.534	14	9.064	143	29.322	72
Vegetables primary	24.7036	153	19.7172	55	31.3526	59	31.6362	25	54.9520	192
Fruit. fresh nes	69.344	1	77.069	1	39.941	9			52.952	31

- Although Kazakhstan has a large overall landmass, Uzbekistan is the CA country that allocates the largest harvested area for the production of fresh fruit and vegetables

Livestock

- Animal husbandry and livestock production play a dominant role in agriculture in Turkmenistan and Kyrgyzstan. The most common animals reared are sheep, goats, cattle, horses and chicken. Pigs make up a small proportion of livestock production in all Central Asian countries, a result of the prevalence of Islam in the region.
- The largest producer of cattle, chicken, sheep and goat across the CA region is Uzbekistan, with over 12 million cattle, 65 million chickens and 19 million sheep and goats produced in 2016. In contrast, Kazakhstan and Kyrgyzstan dominate in horse production, reflecting the countries' nomadic culture and the prominence of horse meat in their national cuisines.
- The major products obtained from livestock production in the countries of Central Asia include meat, milk, eggs, wool and sheep ("karakul") skin.

Cattle, chicken, sheep and goats production in 2016, in thousand units.
Source: FAO database (2018)



Horse production in 2016, in thousand units.
Source: FAO database (2018)



CA livestock production snapshot in 2016. Source: FAO database (2018)

Livestock and poultry species	unit	Kazakhstan		Kyrgyzstan		Tajikistan		Turkmenistan		Uzbekistan	
		2017	% change	2016	% change	2017	% change	2016	% change	2017	% change
Cattle	thous. heads	6,838.1	105.4	1,527.8	102	2,315.3	102	2,426.3	103.8	12,414.7	101.9
Cows (included in cattle)	thous. heads	3,209.9	107	769.9	101	1,192.5	102	1,042	-	4,418.3	104.8
Sheep and goats	thous. heads	18,300.6	99.3	6,022.6	101	5,567.4	102.8	16,441.2	100.5	20,680.5	105
Pigs	thous. heads	834	97.7	51.1	101	448	84.1	4.3	67.8	87.0	100
Horses	thous. heads	2,373.7	107	4,67.2	104	80.4	100	25.9	100	216.9	101.4
Chicken	thous. heads	40,051.7	109	5,673.6	101	5,255.6	102.8	16,518	103.7	71,343.4	106.4
Production of the main types of livestock products											
Slaughtered livestock and poultry (live weight)	thous. tonnes	1,702.0	103.0	212.4	102	248.8	106.6	315.9	102	2,281.1	105
Cow milk	thous. tonnes	5 341.60	103.0	1524.6	103	950.0	103.5	2,069		10,083.2	103.9
Eggs	mln.	4 757.20	100	469.7	108	341.0	101	796.2	101	6,605.5	107.4
Wool	tonnes	38500	100	1,238.3	101	7,521.5	103	-	-	37.1	99.9
Karakul skin	thousands	4.3*	60.5	-	-	-	-	-	-	1,089.7	103.3
Productivity of livestock and poultry											
Average milk yield per cow	kg	2,324	100.9	1,978	99	1,679	103	1,984	-	-	-
Average egg yield per laying hen		233	100	113	100	221	99	-	-	-	-

Use of fertilizers

- In order to increase productivity in agricultural production, CA countries use fertilisers, with the practice particularly prevalent in Uzbekistan. On average, Uzbekistan uses all three types of fertilisers markedly more than the other countries in the region. One explanation for this is that cotton production is generally associated with the land degradation caused by pollution to both water and the environment. The desiccation of the Aral Sea has led to increased salt levels in the soil in the western part of Uzbekistan. In order to compensate for this loss, farmers have to use larger amounts of fertiliser, sometimes in volumes that may exceed the nationally and internationally accepted levels of fertiliser application.

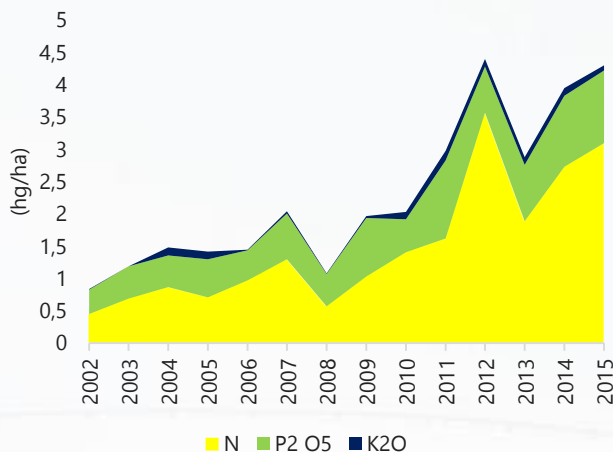
Fertilizers in CA in 2014. Source: FAO database (2018)

		Usage	Production	Export	Import
Kazakhstan	Nutrient nitrogen N (total)	2.73	57000	63413	69655
	Nutrient phosphate P2O5 (total)	1.1	13000	24832	3467
	Nutrient potash K2O (total)	0.12	700	25	10848
Kyrgyzstan	Nutrient nitrogen N (total)	26.37	0		26623
	Nutrient phosphate P2O5 (total)	3.66	0		2104
	Nutrient potash K2O (total)	0.2	0		800
Tajikistan	Nutrient nitrogen N (total)	65.18	44701		12009
	Nutrient phosphate P2O5 (total)	4.71			
	Nutrient potash K2O (total)	0.57			501
Uzbekistan	Nutrient nitrogen N (total)	143.97	1012307	296096	4620
	Nutrient phosphate P2O5 (total)	44.31	139818	24665	202
	Nutrient potash K2O (total)	14.49	96496	61208	850

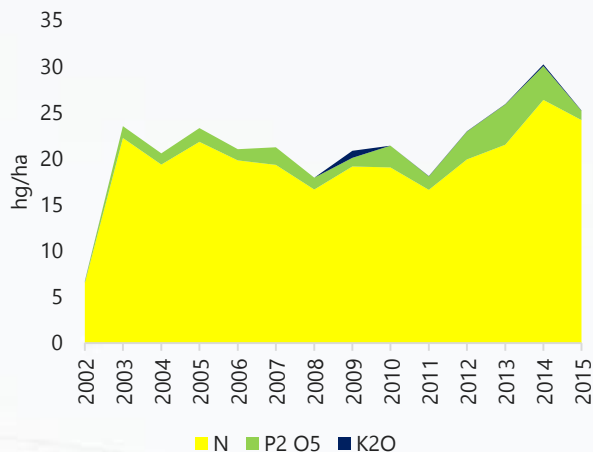
- Although Kazakhstan also produces these fertilisers, usage of fertiliser is quiet low. There is no domestic production of mineral fertilisers in Kyrgyzstan so the country's agriculture is fully dependent on imports of fertilisers, which come mostly from Uzbekistan, Russia and Kazakhstan. Tajikistan also applies fertilisers, which come mostly from other countries, including Uzbekistan.

- Along with exporting nitrogen and phosphate fertilisers, Uzbekistan normally imports potassium fertilisers. The country's main fertiliser manufacture centres are located in Samarkand, Navoiy, Fergana, Kokand and Chirchik. Furthermore, in 2017, Uzbekistan made an agreement with Singapore to open a new joint enterprise Indorama Kokand Fertilizers, which produces new mineral fertilisers such as dicalcium phosphate, potassium sulphate and potassium nitrate. The project will be implemented over a five-year period. Consequently, we can state that one of the most important inputs in the agricultural sector, namely fertiliser volume, will further increase in Uzbekistan.

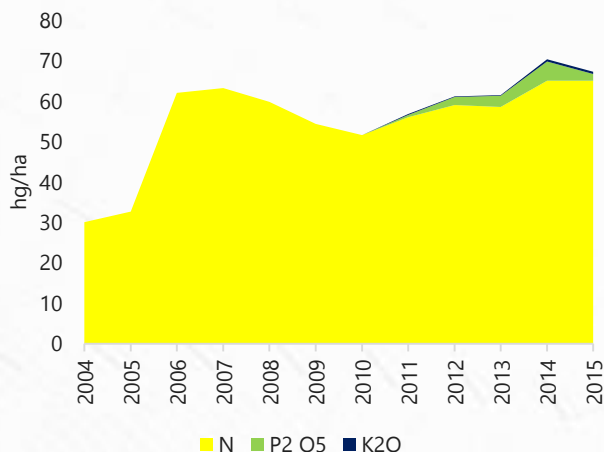
Kazakhstan



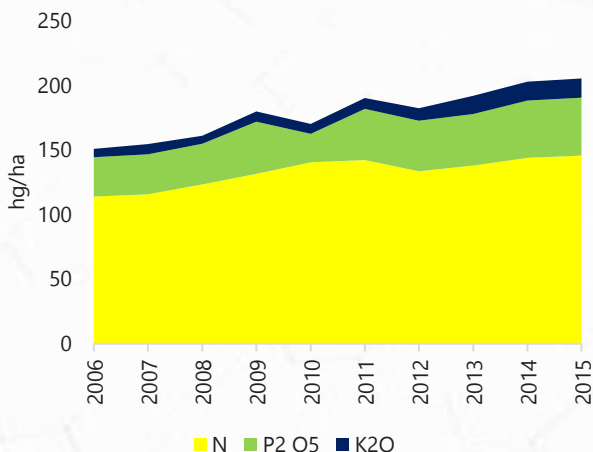
Kyrgyzstan



Tajikistan



Uzbekistan



Regulatory Landscape: Kazakhstan

Types of agricultural entities	Farms and agricultural cooperatives
Restrictions on the number of employees	Not limited
Regulations of the ownership of land (which documents regulate the issues of land ownership, limitations of buying and selling the land, restrictions of the size of farms, etc.)	<p>Agricultural land is only provided to:</p> <ul style="list-style-type: none"> • individuals and legal entities for farming purposes or marketable agricultural production, afforestation, research, experimental and educational purposes, subsidiary farming, gardening and livestock farming. Generally, such agricultural land is provided for use for a period of no less than 5 years. However, agricultural land for the purposes of family / privately operated farms shall be provided for use for at least 10 years. • citizens under private ownership for the development of personal subsidiary farming, gardening and dacha construction; • foreigners, stateless persons, foreign legal entities, as well as legal entities with more than 50% foreign participation for the purpose of a temporary lease for a maximum period of 25 years (temporarily suspended until 31 December 2021). <p>Selling agricultural land to foreign entities is prohibited.</p>
Compulsory delivery quotas of agricultural products (compulsory state orders - (plans) of fruits, vegetables, livestock, etc.; the share of land allocated to delivering compulsory delivery quotas; etc.)	Not applicable
Government support in fulfilling compulsory delivery quotas (direct subsidies in the form of cash, payments, etc.; the provision of materials as fertilizers, fuels and lubricants, etc.;	<p>The government provides direct subsidies that compensate for the credits and the lease of technological equipment and agricultural machinery;</p> <p>Governmental support in different spheres: animal husbandry, small cattle, horse breeding, etc.</p>
Pricing of compulsory delivery quotas (price ceilings or floors, futures or forward contracts, etc.)	Not applicable.
Requirements for exporting agricultural producers (export taxes, export quotas, compulsory sale of foreign exchange from export revenues to the government, etc.)	<p>Turnover made on the realization of exported goods will be subject to a zero percent tax rate.</p> <p>Kazakh legislation provides no direct limitations on exports.</p> <p>However, the government can introduce amendments regarding exports of agricultural products, if the situation should change for the worse.</p>
Administrative issues (average number of days to open and close business, average number of documents to open and close business, staff quotas and forms of business entities, etc.)	<p>On average, 4-6 documents are required to open and close a business. It takes 3 working days to open a business, and approximately 6 months to close one. Terms may differ.</p> <p>Legal entities have 4 different categories of employees, and there is a staff quota of 30% foreign employees in the first and second categories, and a 10% staff quota of foreign employees in the third and fourth categories.</p> <p>Forms of business entities:</p> <ul style="list-style-type: none"> • Joint stock company • State enterprise • Production cooperative • Business partnership. <p>Most legal entities are registered in the form of an LLP or JSC.</p>

Regulatory Landscape: Kazakhstan (cont.)

<p>Corporate taxes (corporate income tax, VAT, land tax, etc.)</p>	<p>The corporate income tax rate is generally 20%, but there are specific tax provisions for agricultural legal entities. For example, the taxable income of legal entities that are producers of agricultural products is subject to a 10% taxation rate if the income was received through the agricultural production, the production of beekeeping products, as well as the processing and realization of the company's own production. Additional tax rates are provided by Art. 147 of the Kazakh Tax Code.</p> <p>VAT: 12% and 0%</p> <p>The tax rate for land depends on both the type of land and the region.</p>
<p>Infrastructure (access to water, utilities, communications, etc.)</p>	<p>Access to utilities and communications is granted on the basis of a contract with the owner of the engineering infrastructure. Depending on the region, some utilities and communications may not be available.</p> <p>Access to water also depends on the territory. Some types of territories, such as those located in the northern region, are not irrigated at all, but in the south many types of agricultural land are irrigated, which also depends on the climatic conditions. Irrigation is mainly carried out by the state.</p>
<p>Operations (regulations on sales, prices, exports and imports, etc.)</p>	<p>In Kazakhstan, all trading operations (exports and imports) are generally regulated by the Kazakh Ministry of the National Economy. There are no direct regulations on sales and prices of agricultural products; however, they should comply with antitrust legislation.</p>
<p>Government support (direct subsidies in the form of cash, payments, etc.; the provision of materials such as fertilizers, fuels and lubricants, etc.; easy access to credits; favourable tax and customs regimes; privileged access to utilities, etc.)</p>	<p>Subsidies are provided according to the Agrobusiness-2020 Development of the Agro-industrial Complex and 2013-2020 Governmental Programme.</p> <p>The following support is offered:</p> <ul style="list-style-type: none"> • Subsidizing remuneration rates on credits • Subsidizing leasing of technological equipment and agricultural machinery • Creation and expansion of dairy farms • JSC operation "Fund for financial support of agriculture" • "Kulan" lending programme for the development of horse breeding • "Altyn Asyq" lending programme for the purchase of small cattle • Agricultural sector development programme 2013-2020 • State support for animal husbandry. <p>In 2016, Kazakhstan doubled the volume of its loans provided to the agricultural sector by providing microloans, whilst also increasing its support for agriculture by 48%. Between January and August 2016, banks provided the agricultural sector with credits totaling 188 billion tenge. The main source of funding was provided through KazAqro National management holding JSC.</p>
<p>Top agricultural producers</p>	<ul style="list-style-type: none"> • Alibi Holding LLP • Kazexportastyk Holding JSC • Medet-Holding LLP • Alel-Agro JSC • Ust-Kamenogorskaya pticephabrica JSC

Regulatory Landscape: Kyrgyzstan

Types of agricultural entities	Family-operated farms and agricultural cooperatives
Restrictions on the number of employees	Not limited
Regulations of the ownership of land (which documents regulate the issues of land ownership, limitations of buying and selling the land, restrictions of the size of farms, etc.)	<p>There are certain restrictions with regard to the ownership of agricultural land. Pursuant to the legislation, only local companies that are involved in agriculture and citizens can own agricultural land. Transferring ownership of agricultural lands to foreign individuals and legal entities is prohibited.</p> <p>For these purposes, companies that are registered in Kyrgyzstan, and the ownership of which by foreign persons exceeds 20%, are considered to be foreign, as are companies that are controlled or managed by foreign persons or legal entities.</p> <p>N.B. In 1999, agricultural land was distributed amongst citizens. The size of the agricultural land distributed depended on the region. Today, 98% of agricultural land in Kyrgyzstan is private.</p>
Compulsory delivery quotas of agricultural products (compulsory state orders - (plans) of fruits, vegetables, livestock, etc.; the share of land allocated to delivering compulsory delivery quotas; etc.)	Each year the government establishes a minimum volume of purchases of agricultural products for state needs.
Government support in fulfilling compulsory delivery quotas (direct subsidies in the form of cash, payments, etc.; the provision of materials as fertilizers, fuels and lubricants, etc.;	Not applicable
Pricing of compulsory delivery quotas (price ceilings or floors, futures or forward contracts, etc.)	Not applicable.
Requirements for exporting agricultural producers (export taxes, export quotas, compulsory sale of foreign exchange from export revenues to the government, etc.)	<p>There are currently no limitations on exports of agricultural products. However, customs clearance of agricultural products from Kyrgyzstan is subject to detailed inspection by customs authorities of other countries.</p> <p>There are currently no export taxes or export quotas for exports of agricultural products.</p>
Administrative issues (average number of days to open and close business, average number of documents to open and close business, staff quotas and forms of business entities, etc.)	<p>On average, 3-5 documents are required to open a company depending on the type of company.</p> <p>Under the current legislation, it takes 3 working days to open a business; however, in practice it actually takes 3 to 5 working days. Closing a business takes up to 7 calendar days following the submission of all the necessary documents.</p> <p>Legislation does not establish staff quotas for companies; however, at least 50% of staff must be Kyrgyz citizens.</p> <p>Forms of legal entities:</p> <ul style="list-style-type: none"> • Full partnership • Limited Partnership • Limited Liability Company • Additional Liability Company • Joint Stock Company. <p>Most legal entities are registered in the form of an LLC or JSC.</p>

Regulatory Landscape: Kyrgyzstan

(cont.)

<p>Corporate taxes (corporate income tax, VAT, land tax, etc.)</p>	<p>Corporate income tax: 10%</p> <p>It should be noted that the income of agricultural producers is exempt from corporate income tax.</p> <p>VAT: 12%</p> <p>It should be noted that supplies of agricultural products and products produced through the industrial processing of local berries, fruit and vegetables are exempt from VAT.</p> <p>The tax rate for agricultural lands depends on the type of agricultural land and the region.</p>
<p>Infrastructure (access to water, utilities, communications, etc.)</p>	<p>Access to utilities and communications is granted on the basis of a contract with the owner of the engineering infrastructure.</p> <p>Depending on the region, some utilities and communications may not be available.</p> <p>One of the areas of the agricultural sector being improved is the development of the services providing irrigation water. The maintenance of irrigation systems funded through the state budget and fees paid for water supply services.</p>
<p>Operations (regulations on sales, prices, exports and imports, etc.)</p>	<p>Kyrgyz legislation does not establish prices for agricultural exports and imports. However, sales and prices of agricultural products in the Kyrgyz Republic must comply with Kyrgyz antitrust legislation.</p>
<p>Government support (direct subsidies in the form of cash, payments, etc.; the provision of materials such as fertilizers, fuels and lubricants, etc.; easy access to credits; favourable tax and customs regimes; privileged access to utilities, etc.)</p>	<p>The government provides the following support for the development of agriculture:</p> <ul style="list-style-type: none"> • Development of crediting in the agro-industrial complex • Carrying out procurement operations and commodity interventions • Regulation of exports and imports of agri-food goods within the Kyrgyz economy • Technical equipment of the agro-industrial complex • Attracting investments to the Kyrgyz agri-food sector • Providing veterinary-sanitary and phytosanitary security • Applying tax, budgetary, customs-tariff, technical regulations and other measures in accordance with Kyrgyz legislation • Organizing information and marketing support for the agro-industrial complex • Scientific, normative and methodological support and training of personnel for the agroindustry. <p>There are currently five commercial banks issuing preferential and unsecured credits to agricultural producers in accordance with the state programme for the development of agriculture. The annual interest rate for preferential credits is 10%, and the repayment period is up to 3 years</p>
<p>Top agricultural producers</p>	<ul style="list-style-type: none"> • AKUN CJSC • Abdysh-Ata LLC • Yashar LLC • Kayndy-Kant JSC • Arpa-Brewery JSC

Regulatory Landscape: Tajikistan

Types of agricultural entities	Dekhkan farms
Restrictions on the number of employees	Not limited
Regulations of the ownership of land (which documents regulate the issues of land ownership, limitations of buying and selling the land, restrictions of the size of farms, etc.)	The land legislation of Tajikistan provides for the state's exclusive ownership of land. However, legal entities and individuals are granted land use rights only. Land use rights for an indefinite term and lifetime inheritable use is only granted to legal entities and citizens of Tajikistan. Foreign investors may obtain temporary land use rights for up to 50 years. However, this right does not extend to agricultural and specially protected categories of land. There are also restrictions on foreign investors and individuals owning residences.
Compulsory delivery quotas of agricultural products (compulsory state orders - (plans) of fruits, vegetables, livestock, etc.; the share of land allocated to delivering compulsory delivery quotas; etc.)	Not applicable
Government support in fulfilling compulsory delivery quotas (direct subsidies in the form of cash, payments, etc.; the provision of materials as fertilizers, fuels and lubricants, etc.)	Not applicable
Pricing of compulsory delivery quotas (price ceilings or floors, futures or forward contracts, etc.)	Not applicable.
Requirements for exporting agricultural producers (export taxes, export quotas, compulsory sale of foreign exchange from export revenues to the government, etc.)	There are no restrictions with respect to exporting agricultural producers (export taxes, export quotas).
Administrative issues (average number of days to open and close business, average number of documents to open and close business, staff quotas and forms of business entities, etc.)	<p>On average, 7-8 documents are required to open a business. The registration procedure for legal entities usually takes up to 5 days.</p> <p>It takes 2-6 months to close a business following the submission of the required documents.</p> <p>There are no restrictions on the number of staffs in firms.</p> <p>Most legal entities are registered in the form of an LLC or JSC.</p>

Regulatory Landscape: Tajikistan (cont.)

<p>Corporate taxes (corporate income tax, VAT, land tax, etc.)</p>	<p>1. Corporate Profit Tax: For production of goods: 13%, but no less than 1 percent of gross income. For other types of activities: 23%, but no less than 1 percent of gross income.</p> <p>2. Dividends paid by resident enterprises shall be subject to taxation at the source of payment at the rate of 12%, with the exception of dividends paid to resident enterprises.</p> <p>3. The VAT rate is 18% of taxable turnover, with the exception of exports and the use of the reduced tax rate and/or 18% of taxable imports.</p> <p>4. Land tax is payable by land users who are allocated the land for permanent use, use for a fixed term, or based on the lifetime inheritable right of use. The land tax rate is established by the government of the Republic of Tajikistan for a 5-year period.</p> <p>In addition, the Tax Code provides a simplified taxation regime for agricultural producers (unified tax), which is applied to dekhkan (farmer) farms and other producers of agricultural products, for whom the land is the main means of entrepreneurial activity. Taxpayers of the unified regime are exempt from the payment of the following taxes:</p> <ul style="list-style-type: none"> • income tax (simplified tax for small businesses), except for income taxable at the source of payment • VAT, with the exception of VAT that is payable when goods are imported into the customs territory of the Republic of Tajikistan, and/or in the case of transactions taxed at the source of payment • tax for users of highways • land tax. <p>A dekhkan farm established without forming a legal entity that is paying unified tax is exempt from paying income tax.</p>
<p>Infrastructure (access to water, utilities, communications, etc.)</p>	<p>Access to utilities and communications is carried out on the basis of an agreement with the relevant governmental body.</p>
<p>Operations (regulations on sales, prices, exports and imports, etc.)</p>	<p>The setting of the prices of exports and imports is not regulated by law. However, sales and prices must be in accordance with antitrust legislation of the Republic of Tajikistan.</p>
<p>Government support (direct subsidies in the form of cash, payments, etc.; the provision of materials such as fertilizers, fuels and lubricants, etc.; easy access to credits; favourable tax and customs regimes; privileged access to utilities, etc.)</p>	<p>State support of the agricultural sector is provided by (1) allocating subsidies (financial support) from the state budget and (2) attracting foreign investments and grants for the development of the agricultural sector.</p> <p>The following sectors are granted subsidies by the government:</p> <ul style="list-style-type: none"> • Elite and primary seed-growing • Increasing the fertility of agricultural lands • Improving the melioration conditions of irrigated arable land • Developing new lands and introducing agricultural land deposits • Increasing the yield and production of cotton, potatoes, vegetables, melons, grains, legumes and tobacco and the fight against their diseases • laying gardens and vineyards, constructing greenhouses for seedlings of fruit crops • Developing the beekeeping industry; • Developing and introducing achievements in science and technology, creating and strengthening the national gene pool of agricultural crops, animals, birds and fish, as well as purchasing modern equipment and tools, chemical and biological products for scientific research institutes within the agro-industrial complex • Organising new production, purchasing and creating a fund for pesticides and mineral fertilizers.
<p>Top agricultural producers</p>	<ul style="list-style-type: none"> • Dekhkan Farm A Kayumv • Stansiyan navsangi Production Cooperative • Gaibullo Dekhkan Farm • Ehsoni Kamol Dehkan Farm • Mahmudov N Individual entrepreneur

Regulatory Landscape: Turkmenistan

Types of agricultural entities	Agricultural JSCs, Dayhan farms and farmers association
Restrictions on the number of employees	Not limited
Regulations of the ownership of land (which documents regulate the issues of land ownership, limitations of buying and selling the land, restrictions of the size of farms, etc.)	<p>Land is a state property and is classed as national wealth, subject to rational and effective use, protected by the state.</p> <p>Land ownership rights only belong to the government of Turkmenistan (except for those plots allotted to Turkmen citizens) and can only be allotted to legal entities for permanent or temporary use or lease.</p> <p>The allotment of land plots is carried out by the Cabinet of Ministers of the Republic of Turkmenistan, regional hokimliks, the city of Ashgabat, cities in the order established by the legislation.</p> <p>Any allotment of land is subject to registration with the competent authority, and the rights to land plots shall only be transferred upon this registration.</p>
Compulsory delivery quotas of agricultural products (compulsory state orders - (plans) of fruits, vegetables, livestock, etc.; the share of land allocated to delivering compulsory delivery quotas; etc.)	Each year the government establishes a minimum volume of purchases of agricultural products for state needs.
Government support in fulfilling compulsory delivery quotas (direct subsidies in the form of cash, payments, etc.; the provision of materials as fertilizers, fuels and lubricants, etc.;	Not applicable
Pricing of compulsory delivery quotas (price ceilings or floors, futures or forward contracts, etc.)	Not applicable.
Requirements for exporting agricultural producers (export taxes, export quotas, compulsory sale of foreign exchange from export revenues to the government, etc.)	There are no restrictions with respect to exporting agricultural producers (export taxes, export quotas), neither is there a need for the sale of export proceeds (this requirement extends solely to state-owned companies).
Administrative issues (average number of days to open and close business, average number of documents to open and close business, staff quotas and forms of business entities, etc.)	<p>Under Turkmen law, in order to register a legal entity only three documents need to be provided to the registration authority. However, the registration procedure can take up to 2-3 months. Furthermore, the registration fee amounts to approximately USD 3000, and the requirements for the charter capital of an ordinary company are relatively high. Currently, charter capital can equal USD 100,000.</p> <p>Forms of business entities:</p> <ul style="list-style-type: none"> • State enterprise • Individual enterprise • Cooperative enterprise • Joint Venture Company • Limited Liability Company • Joint Stock Company. <p>Most legal entities are registered in the form of an LLC or JVC.</p>

Regulatory Landscape: Turkmenistan (cont.)

<p>Corporate taxes (corporate income tax, VAT, land tax, etc.)</p>	<p>Corporate income tax: 25% (depending on the number of employees and the main activity, this can vary from 10% to 30%).</p> <p>VAT: 20% (not applicable to agricultural products sold by the manufacturer).</p> <p>Infrastructure tax: 0.5% of net income.</p> <p>Agricultural enterprises are generally exempt from paying property tax and corporate income tax.</p>
<p>Infrastructure (access to water, utilities, communications, etc.)</p>	<p>Access to utilities and communications is carried out on the basis of an agreement with the relevant governmental body.</p>
<p>Operations (regulations on sales, prices, exports and imports, etc.)</p>	<p>Turkmen legislation does not impose or regulate the prices of agricultural exports and imports. Nevertheless, sales and prices of agricultural products should comply with Turkmen antitrust legislation.</p>
<p>Government support (direct subsidies in the form of cash, payments, etc.; the provision of materials such as fertilizers, fuels and lubricants, etc.; easy access to credits; favourable tax and customs regimes; privileged access to utilities, etc.)</p>	<p>The government provides a range of benefits for the development of agriculture:</p> <ul style="list-style-type: none"> • Carrying out procurement operations and commodity interventions • Developing crediting within the agro-industrial complex • Attracting investments to the Kyrgyz agri-food sector • Easing of tax, budgetary and customs burden • Payment of 50% of costs related to mechanical works, seeds, fertilizers and pesticides, amongst other things.
<p>Top agricultural producers</p>	<p>NA</p>

Regulatory Landscape: Uzbekistan

Types of agricultural entities	Farms, dekhkan farms and cotton-textile clusters
Restrictions on the number of employees	Not limited
Regulations of the ownership of land (which documents regulate the issues of land ownership, limitations of buying and selling the land, restrictions of the size of farms, etc.)	<p>Land is state property and national wealth, subject to rational use, protected by the state and not subject to sale, exchange, gift or pledge, except in the cases established by legislation.</p> <p>Ownership rights of legal entities and individuals to land plots arise in accordance with the procedure established by law, with the privatisation of the objects of trade and services, together with the land plots on which they are located.</p> <p>The granting (realization) of the land plots for possession, use, rent and ownership is carried out in the order of allotment. The allotment of land plots is carried out by the Cabinet of Ministers of the Republic of Uzbekistan, regional hokims, the city of Tashkent, districts and cities in the order established by the legislation</p>
Compulsory delivery quotas of agricultural products (compulsory state orders - (plans) of fruits, vegetables, livestock, etc.; the share of land allocated to delivering compulsory delivery quotas; etc.)	Each year the government sets a compulsory volume of cotton and wheat production.
Government support in fulfilling compulsory delivery quotas (direct subsidies in the form of cash, payments, etc.; the provision of materials as fertilizers, fuels and lubricants, etc.;	The purchase of fruits and vegetables within the state order is made through a contract based on market terms and is guaranteed by an advance payment of no less than 40% of the value of the contract.
Pricing of compulsory delivery quotas (price ceilings or floors, futures or forward contracts, etc.)	<p>Each year, the Cabinet of Ministers sets the purchase prices for raw cotton and wheat for state purposes.</p> <p>Thus, in 2018 the purchase price of long-fibre cotton ranges from 980,000 soums to 5.72 million soums per ton. The price for medium-fiber cotton is set between 847,000 soums and 3.55 million soums.</p> <p>In 2018, the purchase price of one tonne of soft wheat was from 620,000 soums to 1,024,000 soums depending on the grade of wheat.</p>
Requirements for exporting agricultural producers (export taxes, export quotas, compulsory sale of foreign exchange from export revenues to the government, etc.)	There are no restrictions with respect to exporting agricultural producers. Mandatory sale of export proceeds at official exchange rate was abolished in 2017.
Administrative issues (average number of days to open and close business, average number of documents to open and close business, staff quotas and forms of business entities, etc.)	<p>On average, 3-5 documents are required to open a business. It takes 1-2 days to open a business, depending on the type of the firm.</p> <p>The average number of days required to close a business is up to 30-60 days, depending on the type of the business.</p> <p>Legislation does not establish staff quotas for business entities.</p> <p>Forms of business entities:</p> <ul style="list-style-type: none"> • Limited Liability Company • Additional Liability Company • Private Enterprises • Family Business • Joint Stock Company. <p>Most legal entities are registered in the form of an LLC or JSC.</p>

Regulatory Landscape: Uzbekistan

(cont.)

<p>Corporate taxes (corporate income tax, VAT, land tax, etc.)</p>	<p>Agricultural enterprises involved in growing, harvesting, packaging, and sale of own agricultural products are subject to the following taxes:</p> <ul style="list-style-type: none"> • Unified Land Tax of 0.95% levied on the value of land plot that also substitutes income tax, VAT, land tax, water use tax, infrastructure development tax and contributions to off-budgetary funds. • Payroll taxes (personal income tax - progressive up to 23%, employee pension fund contributions - 8% and employer unified social payment - 25% on the payroll). • Dividend distribution tax of 10% (may be reduced under the relevant Double Tax Treaty).
<p>Infrastructure (access to water, utilities, communications, etc.)</p>	<p>Water use for farming and dehqan farms is carried out on the basis of water withdrawal limits from water bodies established by their respective water users' service associations.</p> <p>In the creation of farming and dehqan farms executive authorities carry out the initial development of the territory (the construction of roads, power lines and communications, water supply, gas supply, telephone, radio, land management, land reclamation).</p> <p>They also assist in connecting farms' production facilities to engineering and communication networks.</p>
<p>Operations (regulations on sales, prices, exports and imports, etc.)</p>	<p>Purchases of fresh produce, potatoes, melons and grapes from farmers and dehqan farms are carried out at contractual market prices.</p>
<p>Government support (direct subsidies in the form of cash, payments, etc.; the provision of materials such as fertilizers, fuels and lubricants, etc.; easy access to credits; favourable tax and customs regimes; privileged access to utilities, etc.)</p>	<p>Executive bodies provide farms and dehqan farms with services for the supply of varietal seeds and planting stock of agricultural crops, organic and mineral fertilizers, the means of protecting agricultural plants from pests, diseases and weeds, and maintenance.</p> <p>They assist in the acquisition of agricultural machinery, equipment and lease-to-buy of equipment.</p> <p>Assistance is provided in the acquisition of livestock and poultry.</p> <p>Privately owned enterprises that process fruit and vegetables, potatoes, melon and grapes are exempted until 1 January 2019 from customs payments (with the exception of customs duties) when importing modern equipment and technologies.</p> <p>Processing enterprises that are members of Uzbekozikovkatholding HC are exempt from income tax, corporate property tax, single tax payments for micro firms and small businesses, and mandatory contributions to state trust funds, with the exception of the Unified Social Payment until 1 January 2019.</p>
<p>Top agricultural producers</p>	<ul style="list-style-type: none"> • Uzagroexport JSC • Eximagro Eco Products LLC • Green Oriental Products LLC • Gold Dried Fruits Export LLC • Gold Fresh Fruits LLC

An aerial photograph of agricultural fields. A dirt road runs diagonally from the top right towards the center. A river or canal flows horizontally across the middle. The fields are green and brown, showing different stages of crop growth or soil types.

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