

KAZAKHSTAN



Report on the status of
organic agriculture and
industry in Kazakhstan.

Gefördert durch



Bundesministerium
für Ernährung
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BÖLN

Bundesprogramm Ökologischer Landbau
und andere Formen nachhaltiger
Landwirtschaft

aufgrund eines Beschlusses des
Deutschen Bundestages

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Disclaimer

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This report has been prepared to the best of our knowledge and belief. We cannot however accept any guarantee for the accuracy, correctness or completeness of the information and data provided.

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Content

A General	3
Climate and soil	
Flora and fauna	
<hr/>	
B The Kazakh Eco-Sector	6
History	
National legal framework	
Associations and organisations	
Certification Bodies	
Teaching and research	
<hr/>	
C Production of Plant and Animal Raw Materials	10
Certified area	
Organic production	
Export of raw materials from Kazakhstan	
Import of organic products to Kazakhstan	
<hr/>	
D Processing and Trade of Organic Products	13
<hr/>	
E The Organic Market in Kazakhstan	14
<hr/>	
F Potentials	16
<hr/>	
G Conclusion	18
<hr/>	
H Bibliography	19

General

Map

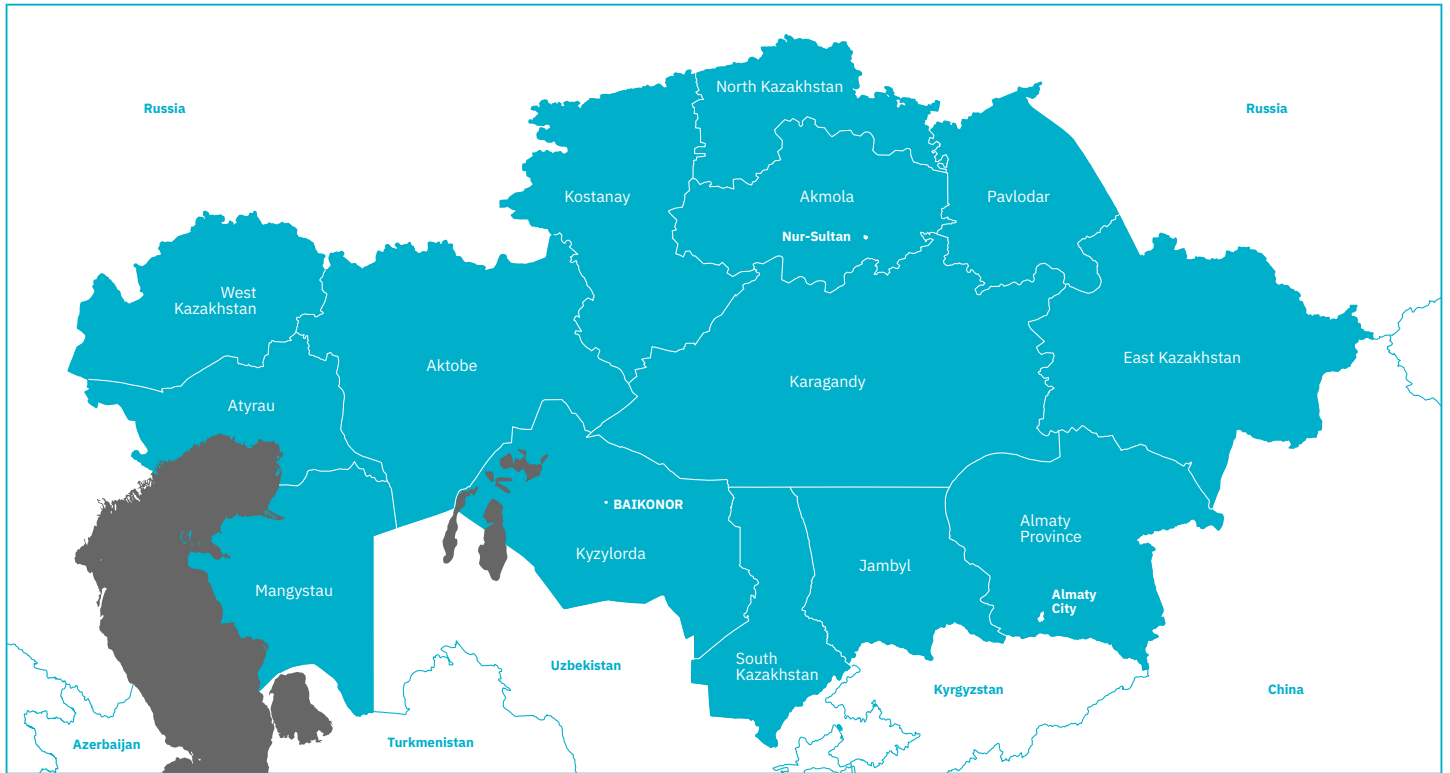


Figure 1: Map Kazakhstan

Facts & Figures

2,724,900 km²

Land area

18.8 Mio.

Population

7 inhabitants/km²

Density

Kazakh, Russian, English

Business languages

8,782 GDP per capita USD

Product

4.7 %

Share of agriculture, forestry and fishery in GDP

Tenge (T), 1T =100 Tiyn)

Currency

Climate and soil

Kazakhstan is the largest landlocked country in the world. As a result of its great distance from the oceans, Kazakhstan is characterised by a distinct continental climate.

Kazakhstan is home to some high mountains. However, most of the land area consists of steppes and deserts. Here, cold, sunny winters with little snow are followed by hot, dry and long summers. Transitional seasons such as spring and autumn do not occur.

In the North, the average temperature in January is -18°C . And in the southern lowlands it is at -3°C still below the freezingpoint. When in winter polar air masses flow into the country from the North, temperatures drop to -45°C in the northern and central areas.

Summer is dry and hot. Average temperatures range from 19°C in the North to 29°C in the South. However, peaks of up to 50°C are possible. In the deserts of the central region, the difference between the highest and lowest temperature of the year is up to 90°C !

The mountains in the Southeast are an exception. Here the summers are short and mild. Winters are milder than in the rest of the country.

Due to low rainfall, deserts and semi-deserts, especially in the West, cover more than half of the country. Precipitation in the lowlands decreases from 400 to 100 mm from North to South. Only in the mountainous regions is there significantly more precipitation, 500-1,000 mm, mostly in the form of snow in winter, which remains until April/May. In the rest of the country, most rain falls in summer, but in the South in early spring.

The humidity is very low. Strong winds blow throughout Kazakhstan, often in the form of sandstorms in summer.

Approximately 75% of the land area could be used for agriculture. The existing steppe soils are very fertile. However, the lack of rainfall is impeding.

Global warming is already very noticeable in Kazakhstan and neighbouring countries. There are significantly higher daytime temperatures. The precipitation, which is already low in the regions, is getting lower and lower.

Flora and fauna

The Kazakh flora and fauna is very rich in species despite the special climate. Some important crops and animals that originated in Kazakhstan must be mentioned here. These species have shaped European agriculture and probably also contributed to Europe's general progress.

The apple descends from the Asian wild apple and was domesticated in Kazakhstan in the Tian-Shan mountains. From there it came to Europe and the rest of the world via the Silk Road. Almaty, the former capital of Kazakhstan, translates as City of the Apple. Apples have been grown in this region for 12,000 years.

Hemp is one of the oldest and most versatile cultivated plants on earth. It probably originated in Kazakhstan too and then migrated around the world.

Ropes, (sail) cloth, paper, food and medicines were made from hemp. In Kazakhstan it still grows wild everywhere.



Figure 2: Wild apple trees in front of the Tian- Shan Mountains

Another important "export hit" from Kazakhstan are horses. About 5000 years ago, people in Central Asia began to domesticate the wild horses that lived there. The horses were used as riding and draft animals. Their milk and meat are still staple food in Kazakhstan today. The history of agriculture in Kazakhstan must be viewed in a differentiated way. Due to the fact that the Kazakhs originally lived as nomads in harmony with nature in the fertile steppes, agriculture as it is practised today is relatively young. The former nomads lived in yurts.



Figure 3: Prezewalski horses on the Kazakh steppe

These yurts were easy to erect and dismantle. Thus, depending on the weather, they could be transported to the best regions to find ideal conditions for their animals. Horses, camels and small ruminants were kept as farm animals. These animals were, without exception, herbivores and could thus make perfect use of the available grass in the steppes. The female animals were milked and various fermented drinks and cheeses were made from them. Kumys, the national drink of the Kazakhs, should be mentioned here. It is a drink fermented from mare's milk. The nomads' diet was supplemented by the meat of slaughtered animals. The entire animal was used. The nomads' diet consisted of 80% animal products.



Figure 4: Wild hemp plant in Kazakhstan

In southern Kazakhstan, Uyghurs who migrated from China introduced fruit and vegetable cultivation. This is especially present in the region around Almaty. The Kazakhs call this region the Garden of Eden.

However, the Kazakhs are much prouder of their horses than they are of their apples, which must be mentioned at this point. Kazakhs love horses! This applies not only to the keeping of this species, but also to the enjoyment of the meat and their dairy products.

Horse meat is said to have a health-giving effect in Kazakhstan. The same applies to mare's milk.

The Kazakh Eco-Sector

Constant dripping wears away the stone. Now there are a national legal framework and two organic associations in Kazakhstan.

History

Around 1930, the nomads were forced by the Soviet government to abandon their previous life and become sedentary.

This was followed by a huge transformation of steppe land into arable land through state subsidies.

In addition, the livestock was increased enormously. After the collapse of the Soviet Union and the discontinuation of state subsidies for agriculture the reclaimed farmland was left to its own devices. Some agro holdings and smaller family-run farms came into being.

The first organic farms emerged around the turn of the millennium. These were large farms that saw new sales opportunities in organic certification. These farms produce plant products exclusively for export.

International organisations such as the **FAO** (↪) and the **OSZE** (↪) have also been committed to securing food supplies through sustainable agriculture since the early 2000s.

In 2012 the President of the Kazakh Republic presented the strategy "Kazakhstan 2050: the new political course of the successful state". This laid the foundation for the state expansion of organic agriculture in Kazakhstan.

National legal framework

On 27 November 2015, Kazakhstan enacted Law No. 432 on Organic Production. This law defines the legal, economic, social and organisational basis of organic production with the aim of ensuring sustainable use of land, promoting healthy nutrition and environmental protection. The following sectors are considered in the law: Agricultural, processed, aquaculture and wild collection products.



Figure 5: Yurt with sheep in the mountains of Kazakhstan

The Kazakh organic law is based on the organic regulation of the European Union.

The only difference is that it is not yet as detailed.

In order to implement Law No. 432 on organic production, the following regulations have been drawn up:

- Rules for the production and turnover of organic products issued by the Ministry of Agriculture on 23 May 2016 under No. 230;
- Rules for keeping a register of producers of organic products issued by the Ministry of Agriculture on 18 December 2016 under No. 1-3/1102;
- List of substances that may be used in the production of organic products. This list was issued by the Ministry of Agriculture on 23 May 2016 under No. 231i.

In 2017, a further three national standards were adopted, which came into force in 2018, to regulate organic production and labelling:

- CT PK 3109-2017 Labelling:
Technical requirements and order of labelling of organic products;
- CT PK 3110-2017 Conformity assessment:
requirements of the authorities to confirm the conformity of production of organic products and organic produce;
- CT PK 3111-2017 Ecological products:
Requirements for the manufacturing process.

In Kazakhstan, there is only one state inspection body accredited according to the national standard. According to the accreditation body, no enterprise in Kazakhstan has been certified according to Kazakh organic law so far. A private inspection body is currently being established. KazBioKontrol is to certify the first Kazakh producers.

Associations and organisations: Qazaqstan Organic Producers Union

The Union of Organic Producers of Kazakhstan was founded in November 2018. The main reason was initially to promote the umbrella brand "Qazaq Organic Food".

Since 2019 it has been a member of the **International Federation for Organic Agriculture IFOAM**. The Union brings together organic farming participants, agricultural producers, experts and scientists. The aim of the federation is to develop export and establish Kazakh organic agricultural products through consumer education.

The Union of Organic Producers of Kazakhstan works for common goals as well as for specific concerns of the association members.

The main actor Arsen Kerimbekov always organises information events about organic farming.

In 2020, Kazakhstan was represented with a stand at Bio Fach in Nuremberg. This was organised by the Qazaqstan Organic Producers Union and supported by the German-Kazakh Agricultural Policy Dialogue.

Associations and organisations: KAZFOAM

The organisation **KAZFOAM** (Kazakh Federation of Organic Agriculture Movements) is the first organisation active in organic agriculture since 2010. The chairman of KAZFOAM, Yevgeniy Kimov, organised a conference on organic farming in Kazakhstan in September 2010 together with his colleagues from the Organic Federation of Ukraine ([↗](#)).

KAZFOAM currently works with 30 partner companies. Membership in the association is currently still free of charge. This is to be changed soon in order to cover the costs. Nevertheless, the association remains non-commercial.



Figure 6: Kazakh eco-label

The association is currently planning to set up organic demonstration farms with a focus on fruit and vegetable production in the Almaty region.

The association is supported by **USAID** ([↪](#)), **UNDP** ([↪](#)) and **FAO** ([↪](#)).



Figure 7: Meeting with the Russian delegation at the Kazakh stand at Biofach in 2020



Figure 8: Kazakh stand at Biofach in 2021

Certification Bodies

For farms certified according to the North American Organic Standard NOP, there is an online database ([↪](#)) with a search and filter function, so that, for example, all farms with their respective inspection body for Kazakhstan are displayed. Since only farms certified according to the NOP standard are listed there, the database unfortunately does not provide any information on farms certified according to the EU organic standard.

In Germany there is a comparable **online database** ([↪](#)) for **German farms** only. The inspection bodies are obliged to publish the companies they have certified there.

A list of currently approved inspection bodies in "third countries" can be found in Annex IV of the EU legislation ([↪](#)). There, for each inspection body, it is listed in tabular form for which inspection area in which countries under which inspection body code an approval exists. Currently, a total of 17 inspection bodies are registered. However, at present only about 7 inspection bodies are actually active in Kazakhstan. More than half of the currently 53 certified enterprises are certified by the Ukrainian inspection body "Organic Standard" (KZ-BIO-108) ([↪](#)).

Info

Qazaqstan Organic Producers Union

– Contact person: Arsen Kerimbekov

<https://www.qopunion.bio/>



Association KAZFOAM

– Contact person: Yevgeniy Kimov

<https://de-de.facebook.com/KAZFOAM/>



Unfortunately, there is no global database where all farms can be found. However, the inspection bodies operating in the third country are required to publish their farms certified according to the EU equivalent in a list on their homepage. Due to the sometimes suboptimal design of websites and language barriers searching for and checking the current status of a Kazakh organic farm is cumbersome and time-consuming.

Current information on additional requirements for the import of organic products into the **European Union** can also be downloaded from the website (↪) of the **European Commission**. There are still requirements for organic food to be exported from Kazakhstan to the EU.



Figure 9: Information event on organic horticulture June 2021

Teaching and research

At the present time, there is no state-run training institute for organic farming. Neither in practice nor at university level. The only opportunities for further training in Kazakhstan are the events organised by the **German-Kazakh Agricultural Policy Dialogue** (↪) and the above-mentioned associations.

In 2021, the **Kazakh Research Institute of Agricultural Engineering and Crop Production** won the Kazakh government's tender for the research contract in organic agriculture and will start their research soon.

The topics will be: ecological farming system with the creation of sustainable, safe agro-systems based on organic crop rotations, cost-efficient agro-technologies and environmentally friendly production.

Info

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Production of Plant and Animal Raw Materials

Clear focus on crop production. Very large increase in organically certified area in recent years despite large decrease in organic wheat sales in 2019.

Certified area

The ecologically managed areas are located in the Kostanay, Akmola, Almaty and North Kazakhstan regions, as well as in the Karagandy and Aktobe regions. Kostanay probably has the largest organic area.

The certified organic area in Kazakhstan is currently 294,289 ha (2019). The share of organic area in the total agricultural area is 0.1%. The increase in organic farmland over the last 10 years has been 120%: A huge increase of 53% has been recorded between the year 2018 and 2019. The organic area was increased by 102,156 ha. This means that Kazakhstan occupies the 8th place in the world in terms of area increase (Willer, Schlatter, Trávníček, & Kemper, 2021)¹.

The ten countries with the highest increase of organic land (2019/ha)

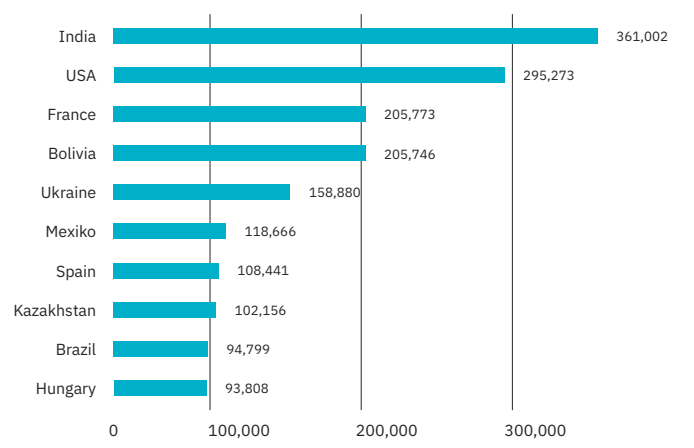


Figure 10: FiBL survey 2021

1 Willer, H., Meier, C., Trávníček, J. & Schlatter, B. (2021). The World of Organic Agriculture Statistics and Emerging Trends 2021. Frick and Bonn.: FiBL and IFOAM

Organic production

The Kazakh government does not yet keep statistics on the organically farmed area in the country, nor on the number of organically managed farms.

According to a query of the inspection body websites active in Kazakhstan, 36 producers are currently certified. In addition, 17 farms are active in trade and export.

If we divide the 294,289 ha estimated in the previous section by the 36 active producers identified, we obtain an average size of 8174 ha per organic farm.

No livestock farms are currently certified in Kazakhstan. The focus of Kazakhstan's organic agriculture is on the production of cereals, pulses and oilseeds.

There are also wild collection projects for liquorice roots and various herbs for medicinal teas. There is one organic beekeeping farm.



Figure 11: Liquorice roots in Kazakhstan

Product categories of organic food imports by export country (2019/Mio. t)

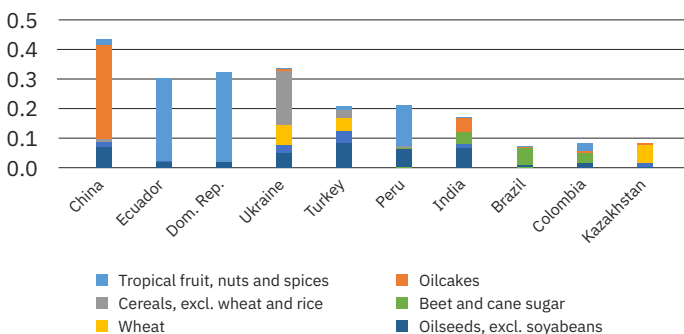


Figure 12: Organic food imports by exporting country (European Union, 2021)

Import volumes of organic cereals, oilseeds and sugar by exporting country (2020/Mio. t)

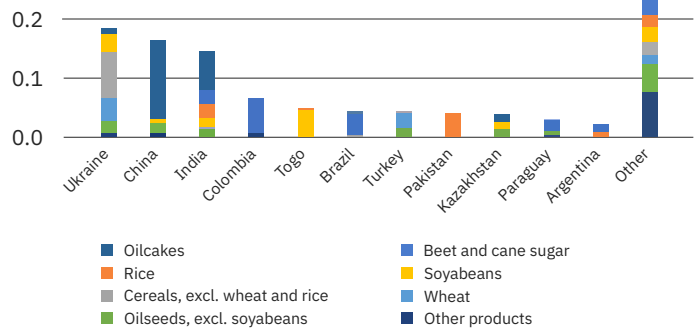


Figure 13: Import volumes of organic cereals, oilseeds by exporting countries (European Union, 2021)

Export of raw materials from Kazakhstan

Almost no domestic organic food is marketed in Kazakhstan and the three producers listed on the NOP database mentioned above are also EU-equivalent certified. These two facts lead to the assumption that almost 100% of the organic products produced in Kazakhstan are exported to Europe.

As there is currently no reliable data available from Kazakh agencies for the export of organic products, only the European Commission's data on the import of organic products can be used as a basis for the time being (↪). In the market report available there, Kazakhstan entered the top ten suppliers of organic products to the EU in 2019. The largest part of the deliveries was cereals.

Although in 2019 the area increase was 53%, the export of organic wheat from Kazakhstan to the EU decreased by 96%.

The reason for this is the low price level for organic grain. For the Kazakh exporters the extra effort for additional controls, sampling and freight costs did not pay off. It was probably similarly lucrative to market the goods conventionally to neighbouring countries. As a result, the total export volume from Kazakhstan fell by 30% to 40,692 t.

In contrast, Kazakhstan increased its export volume of oilseeds and oilcake enormously.

Import of organic products to Kazakhstan

Kazakhstan produces mainly agricultural raw materials for export. There is no processing that requires additional raw materials. Even in well-stocked Kazakh supermarkets there are only a few processed organic products from the EU. We conclude from this that there is no import of organic raw materials to Kazakhstan.

Import volume of organic oilseeds by exporting countries (tsd. t)

	2019 Imports	2020 Imports	Change (%)	2020 Share (%)
China	18.9	19.6	4.1	14.3
Ukraine	29.1	19.3	-33.7	14.1
Turkey	37.8	15.9	-58.0	11.6
Kazakhstan	12.5	15.1	21.6	11.0
India	13.1	14.1	7.8	10.3
Russian Federation	3.7	13.2	259.8	9.6
Egypt	4.6	9.3	99.8	6.8
Moldova	15.7	8.5	-45.7	6.2
Total	156.3	137.1	-12.3	100.0
Share of selected countries in the total volume (%)	87	84		

Figure 14: Import volume of organic oilseeds by exporting countries (European Union, 2021)

Import volume of organic oilcake by exporting countries (tsd. t)

	2019 Imports	2020 Imports	Change (%)	2020 Share (%)
China	253.0	134.8	-46.7	58.1
India	28.2	66.5	135.8	28.7
Kazakhstan	2.0	11.7	469.6	5.0
Ukraine	8.1	7.4	-9.4	3.2
Ethiopia	0.0	5.2	N.A.	2.3
Brazil	5.7	4.6	-19.4	2.0
Total	298.1	231.8	-22.2	100.0
Share of selected countries in the total volume (%)	100	99		

Figure 15: Import volume of organic oilcake by exporting countries (European Union, 2021)

Import volume of organic soybeans by exporting country (tsd. t)

	2019 Imports	2020 Imports	Change (%)	2020 Share (%)
Togo	42.3	51.0	20.4	37.1
Ukraine	17.1	28.7	67.8	20.9
India	21.6	15.6	-27.8	11.3
Kazakhstan	7.4	11.0	49.6	8.0
Uganda	2.3	8.8	282.7	6.4
Benin	0.7	6.3	758.5	4.6
Burkina Faso	3.7	5.2	41.1	3.8
China	26.5	4.4	-83.4	3.2
Total	130.3	137.3	5.4	100.0
Share of selected countries in the total volume (%)	93	95		

Figure 16: Import volume of organic soybeans by exporting country (European Union, 2021)

Processing and Trade of Organic Products

As already mentioned, in Kazakhstan only the home-produced raw products are processed. Oil is pressed from linseed to produce oil cake and linseed oil. Liquorice roots are dried and crushed. If one disregards the EU Organic Regulation, it is more a case of preparing the raw materials produced than of actually processing them.

This explains the lack of import of raw materials. The fact that no processing takes place in Kazakhstan serves as an indication of the non-existent organic market in Kazakhstan itself. In some very well-stocked supermarkets, imported organic goods certified according to the EU Organic Regulation can be found sporadically. However, the small number of certified products is not an obstacle to advertising other products as organic.



Figure 17: Ecological department in a Kazakh supermarket

The Organic Market in Kazakhstan

In Kazakhstan, there is a very small market for organic food, which is imported into Kazakhstan and usually costs four times the usual price. They tend to be consumed by foreigners. In contrast, there is no market for organically produced food from Kazakhstan.



Figure 18: Presumably happy horses in Kazakhstan

Possible reasons for this are outlined below. It must be noted, however, that no representative consumer survey was conducted for this purpose. Rather, the statements of individual Kazakhs about the Kazakh way of life are reproduced and conclusions drawn.

As already mentioned, meat plays a central role in the Kazakh diet. Horse meat is held in particularly high esteem. If you have saved some mobile phone numbers of Kazakh citizens, you will regularly receive videos via the respective messenger services. These always contain horses in the vast Kazakh steppe. Sometimes breeding animals, sometimes meat horses. So it is omnipresent that the horses graze on the steppe and thus give good meat and milk.

For the Kazakhs, something is of good quality if it has been produced in Kazakhstan. According to their understanding, it is equated with organic. Another important quality feature for the Kazakh population is halal certification. This is also very important to the predominantly Muslim Kazakhs.

While visiting a classy Kazakh supermarket, I asked the market manager about organic products. She directed me to the regional products, saying that this was all organic.

The situation in Kazakhstan is different from that in Russia and Ukraine (↵). In both countries, an awareness for organic food developed because it was considered hip in well-heeled circles to consume organic products. This awareness is also slowly catching on among the average population there.

The motivation for consuming organic food is often the health aspect, but also the animal welfare idea. And this could be another reason for the lack of an organic market. The population of Kazakhstan is largely Muslim and thus pork is not consumed. There are no large pig fattening facilities and thus no reports of cruelty and abuse of medicines.

Moreover, in all the ranting about organic farming, one must not forget that Kazakhstan is an emerging country and possibly the population has primarily other problems than dealing with organic farming at the consumer level.



Figure 19: Local dairy products

Potentials

The land potential for arable crops is huge, alternatives to cereals such as hemp cultivation, but also extensive cultivation of the steppe can be an effective means of adapting to climate change.

More than 90% of the Kazakh producers of organic raw materials are huge agro holdings that participate in certification and decide after the harvest whether it is worth exporting to the EU. An organic market comparable to Germany does not exist, because the people who live in rural areas are often self-sufficient and in some cases also provide for their relatives in the cities. There is no desire for organic food among the population of Kazakhstan and no awareness of it yet.

From discussions with conventional legume producers and representatives of agrochemical companies we know that it is normal to spray the legumes dead before harvesting in order to obtain uniform ripeness. These local representatives strongly discouraged the consumption of Kazakh pulses.

Although this issue has not yet reached Kazakh consumers, the Kazakh government is aware of it. It has even included the promotion of healthy eating in its organic regulation, as described earlier. Certainly, the efforts of the FAO and the OSCE have contributed significantly to this.

As mentioned before, Kazakhstan is still on the EU's third country list of unsafe countries. Exporting organic products from Kazakhstan to the EU involves considerable effort for exporters. For example, each batch is sampled separately. There are two regular in-

spections a year. Nevertheless, there is always the danger of "multiplication" of organic products on their way to the EU. A more stringent control and documentation by the Kazakh authorities could help.

The world's biggest problem for agriculture, climate change, is also clearly felt in Kazakhstan. In recent years, water scarcity has increased sharply throughout the country. Yields, especially in wheat cultivation, are constantly declining and are being compensated for by increasing the area under cultivation. In the long term, this will lead to more and more steppe land being cleared to grow grain. But this will release more and more CO². The steppe soils are excellent CO² reservoirs.

The steppes are very valuable biotopes worthy of protection, but they offer far too low-quality fodder for cattle, so that they probably need a very long time to reach slaughter maturity. The longer a cow lives the more climate-damaging gas it emits. Furthermore, cattle can cope excellently with the cold if fed properly (which is not the case there), as their microbial digestion releases heat. But they cannot cope with the heat that prevails in summer. For this reason, horses should be used to refine the steppe grass as they have always been. They are adapted to the forage, the climate and emit fewer greenhouse gases.

Horsemeat is not in great demand in Germany, so there is probably no sales opportunity in Germany without educational campaigns and advertising. We are not aware of any certified organic horsemeat suppliers in Germany. Here in Germany, unfortunately, horsemeat usually ends up in dog food.

Another export possibility would be spray-dried horse milk.

If you travel through Kazakhstan, you will always discover hemp plants along the edges of the fields.

It belongs to the oldest useful and medicinal plants and is therefore versatile.

Its fibres are excellent for making clothes and paper. Insulation material made from hemp fibres is used in the automotive industry.

But hemp's great potential is in human nutrition. It provides all nine essential amino acids, zinc and vitamin E. Its oil has an excellent omega 3 to 6 fatty acid ratio of 3:1. It also contains gamma linoleic acid and tastes excellent.

Of course, hemp could also be used in animal feed, but that would be a waste.

In Germany, all hemp products are relatively expensive. Judging by its ingredients, it is of course worth every penny. However, if you look at the cultivation of hemp, you wonder why the price is so high. Hemp is a very frugal plant. It can root very deeply in the soil, which makes it very successful in suppressing weeds. Due to its deep roots, it has a very low water requirement.

It makes good sense to plant hemp in the crop rotation after legumes. Hemp is self-tolerant, so it can occur several times in a row in the crop rotation. Special technology is required for harvesting hemp. The hemp straw can be shredded and sieved. The resulting wool can be used as insulation material or textile. The remaining fibres could be used to make bricks and fibreboard for construction. So the whole plant can be used.

In Germany, commercial hemp cultivation is permitted but involves considerable bureaucracy, which accounts for its high price.

Another use of hemp is the medical effect, for example CBD, mostly sold as oil. As its distribution in Germany has not yet been finally clarified legally, it is not advisable for Kazakh businesses to invest in the export of CBD oil.



Figure 20: The hemp grows all the same

Conclusion

The Kazakh government is already on the right track with its promotion of organic agriculture.

Kazakh consumers should be involved to optimise this development further. There is a need for massive education campaigns about organic farming. They must show the advantages that organic farming brings to Kazakhstan. They include good, safe and long-term food supply, resource conservation, preservation of unique habitats through climate-friendly farming methods, and preservation or improvement of water quality. The campaign should also aim at informing consumers about organic labels.

The market for food produced in Kazakhstan should be opened up and expanded as quickly as possible.

Of course stricter controls at all levels of the Kazakh market also bring advantages for the export of organic commodities. Stricter controls in the country, through the inspection bodies to be created, could make exports to Europe safer in the future. Kazakhstan could thus be removed from the third country list of unsafe countries, which would be a great advantage for the supply of organic raw goods in Germany.

In order to get own experts for organic agriculture, it would make sense to expand the area of teaching and research. The University of Kassel ([↗](#)) is the first university in Europe to establish a professorship in organic agriculture.

Increased cooperation between universities with organic research in Germany and interested Kazakh universities could create more expertise and an educational infrastructure on organic agriculture in the country.

Info

University of Kassel

— Professorship in organic agriculture.

<https://www.uni-kassel.de/uni/universitaet/kontakt-und-standorte/standort-witzenhausen>

Bibliography

Figures

1	Map Kazakhstan	3
2	Wild apple trees in front of the Thian-Shan Mountains	4
3	Prezewalski horses on the Kazakh steppe	5
4	Wild hemp plant in Kazakhstan	5
5	Yurt with sheep in the mountains of Kazakhstan	6
6	Kazakh eco-label	7
7	Meeting with the Russian delegation at the Kazakh stand at Biofach in 2020	8
8	Kazakh stand at Biofach in 2021	8
9	Information event on organic horticulture June 2021	9
10	Import volume of organic oilseeds by exporting country (tsd. t)	10
11	Liquorice roots in Kazakhstan	11
12	Organic food imports by exporting country (European Union, 2021)	11
13	Import volumes of organic cereals, oilseeds by exporting countries (European Union, 2021)	11
14	Import volume of organic oilseeds by exporting country (tsd. t)	12
15	Import volume of organic oilcake by exporting country (tsd. t)	12
16	Import volume of organic soybeans by exporting country (tsd.t)	12
17	Ecological department in a Kazakh supermarket	13
18	Presumably happy horses in Kazakhstan	14
19	Local dairy products	15
20	The hemp grows all the same	17

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