Workshop on Horticulture Value Chains Development
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Overview of Horticulture Value Chains in Central Asia

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Content

- Objectives;
- Overview of agriculture development in Central Asia and Caucasus;
- Horticulture value chain;
- From supply to value chain in horticulture and its differences;
- Main horticulture crops in Central Asia.

Objectives

- To provide an analysis and visual summary of the fruit and vegetables value chains in AZE, GEO, KAZ, KYR, TAJ, TUR, UZB;
- It is based on database of FAOSTAT and WDI for the period from 2000;
- To consolidate and define the key insights about how countries are positioned in the main horticulture produces;
- It concludes

Population

	2000	2005	2010	2014	20015	2016
AZE	8048600	8391850	9054332	9535079	9649341	9762274
GEO	4418300	4190000	3926000	3727000	3717100	3719300
KAZ	14883626	15147029	16321581	17289224	17544126	17797032
KYR	4898400	5162600	5447900	5835500	5956900	6082700
TAJ	6216205	6854176	7641630	8362745	8548651	8734951
TUR	4516131	4754641	5087210	5466241	5565284	5662544
UZB	24650400	26167000	28562400	30757700	31298900	31848200

Urban population, as % of total

	2000	2005	2010	2014	20015	2016
AZE	51.4	52.4	53.4	54.4	54.6	54.9
GEO	52.6	52.5	52.9	53.5	53.6	53.8
KAZ	55.7	54.7	53.7	53.3	53.2	53.2
KYR	35.3	35.3	35.3	35.6	35.7	35.9
TAJ	26.5	26.4	26.5	26.7	26.8	26.9
TUR	45.9	47.0	48.4	49.7	50.0	50.4
UZB	37.4	36.7	36.2	36.3	36.4	36.5

Agricultural and arable land

Agricultural land use, as % of land area					Arable land			
	2000	**2005**	**2010**	**2014**	**2000**	**2005**	**2010**	**2014**
AZE	57.4	57.6	57.7	57.7	22.1	22.3	22.8	23.3
GEO	43.2	36.3	35.7	36.8	11.4	6.8	6.0	6.6
KAZ	79.8	78.6	80.4	80.4	11.2	10.6	10.6	10.9
KYR	55.9	56.0	55.3	55.0	7.1	6.7	6.7	6.7
TAJ	32.7	33.4	34.0	34.2	5.6	5.4	5.4	5.3
TUR	75.5	74.2	72.4	72.0	4.1	4.3	4.1	4.1
UZB	64.2	62.9	62.7	62.9	10.5	10.3	10.2	10.3

Arable land, hectares per person

	2000	2005	2010	2014	2015
AZE	0.2	0.2	0.2	0.2	0.2
GEO	0.2	0.1	0.1	0.1	0.1
KAZ	2.0	1.9	1.8	1.7	1.7
KYR	0.3	0.2	0.2	0.2	0.2
TAJ	0.1	0.1	0.1	0.1	0.1
TUR	0.4	0.4	0.4	0.4	0.3
UZB	0.2	0.2	0.2	0.1	0.1

Agriculture as % of GDP

	2000	2005	2010	2016
TAJ	27.3	23.8	21.8	23.3
UZB	34.4	29.5	19.8	17.6
KYR	36.6	31.3	18.7	14.4
TUR	22.9	18.8	14.5	9.3
GEO	21.9	16.7	8.4	9.3
AZE	17.1	9.8	5.9	6.0
KAZ	8.6	6.6	4.7	4.9

Employment in Agriculture as % of total

	2000	2005	2010	2014	2015	2016
AZE	41.0	39.3	38.2	36.8	36.4	36.6
GEO	52.1	54.4	49.1	46.9	45.3	45.0
KAZ	34.0	32.4	28.3	20.4	18.0	17.9
KYR	45.3	38.5	29.1	31.6	29.3	29.2
TAJ	58.1	57.0	53.8	57.7	57.7	57.4
TUR	28.8	22.2	19.4	18.6	18.5	18.2
UZB	42.2	39.3	32.6	30.6	30.1	29.5

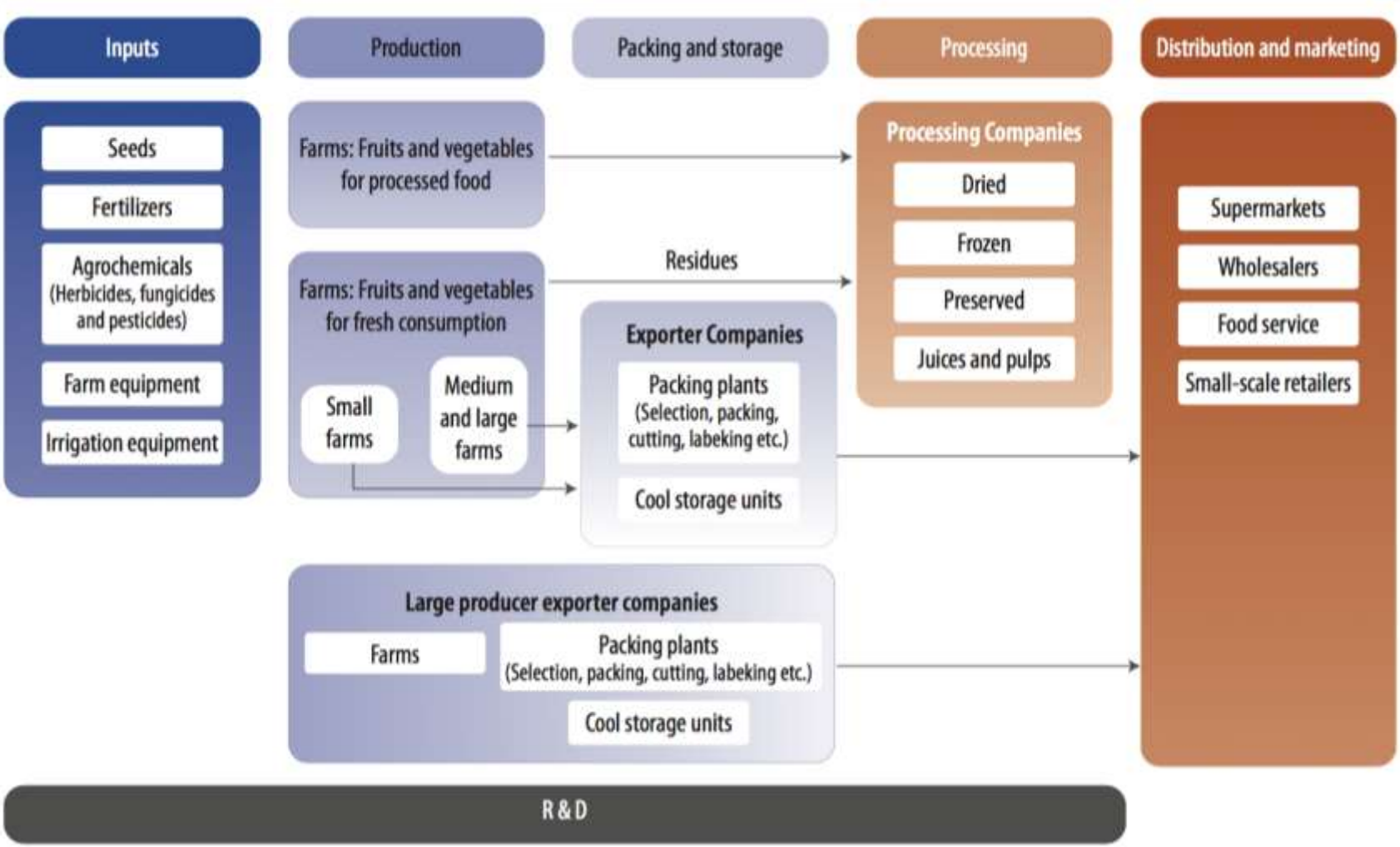
Overview of agricultural sector

- Size of population is expanding in all countries except for GEO;
- But, urban population is increasing in all countries except for UZB;
- Arable land is contracting everywhere due to the scarcity of water;
- Share of agriculture in GDP is declining due to economic transformation in all countries;
- Employment in agriculture is substantially decreasing in all countries but remaining high in TAJ, GEO, AZE.

Horticulture Value Chain

- Includes several segments such as inputs, production, packing and storage, processing, distribution and marketing;
- Is governed by public and private standards, which control sanitary and phytosanitary conditions, quantity, quality, pesticide use and so forth;
- Is regulated by trade agreements. Governments tend to protect their horticulture industries with seasonal tariffs, tariff escalation and direct subsidies.

Fruits and Vegetable Global Value Chain

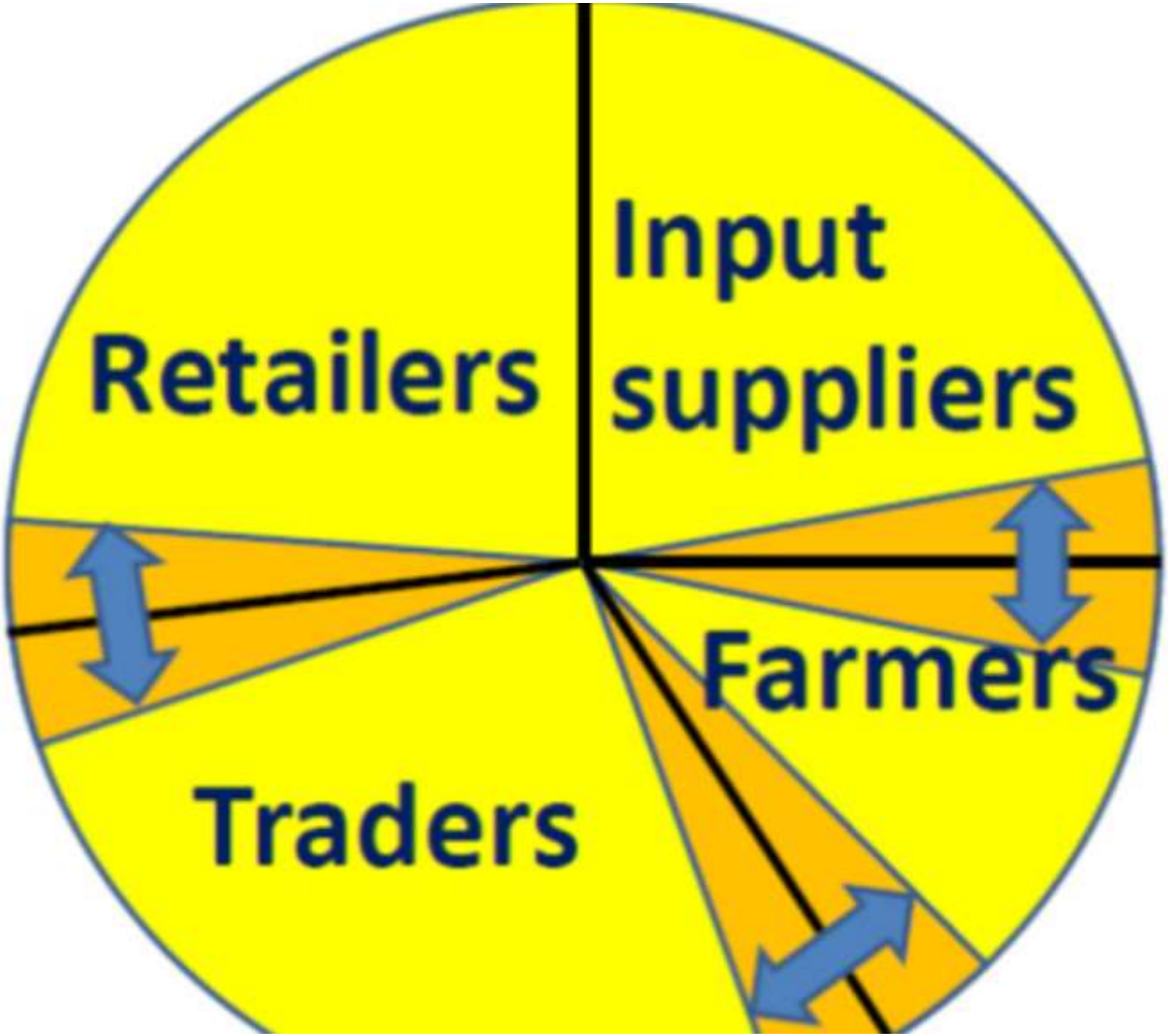


Differences in supply and value chains

- A value chain describes the full range of activities that firms and workers do to bring a product/good or service from its conception to its end use. This includes activities such as design, production, marketing, distribution and support to the final consumer;
- A supply chain emphasizes the manufacturing and distribution-related steps, but do not necessarily reflect a physical transformation.

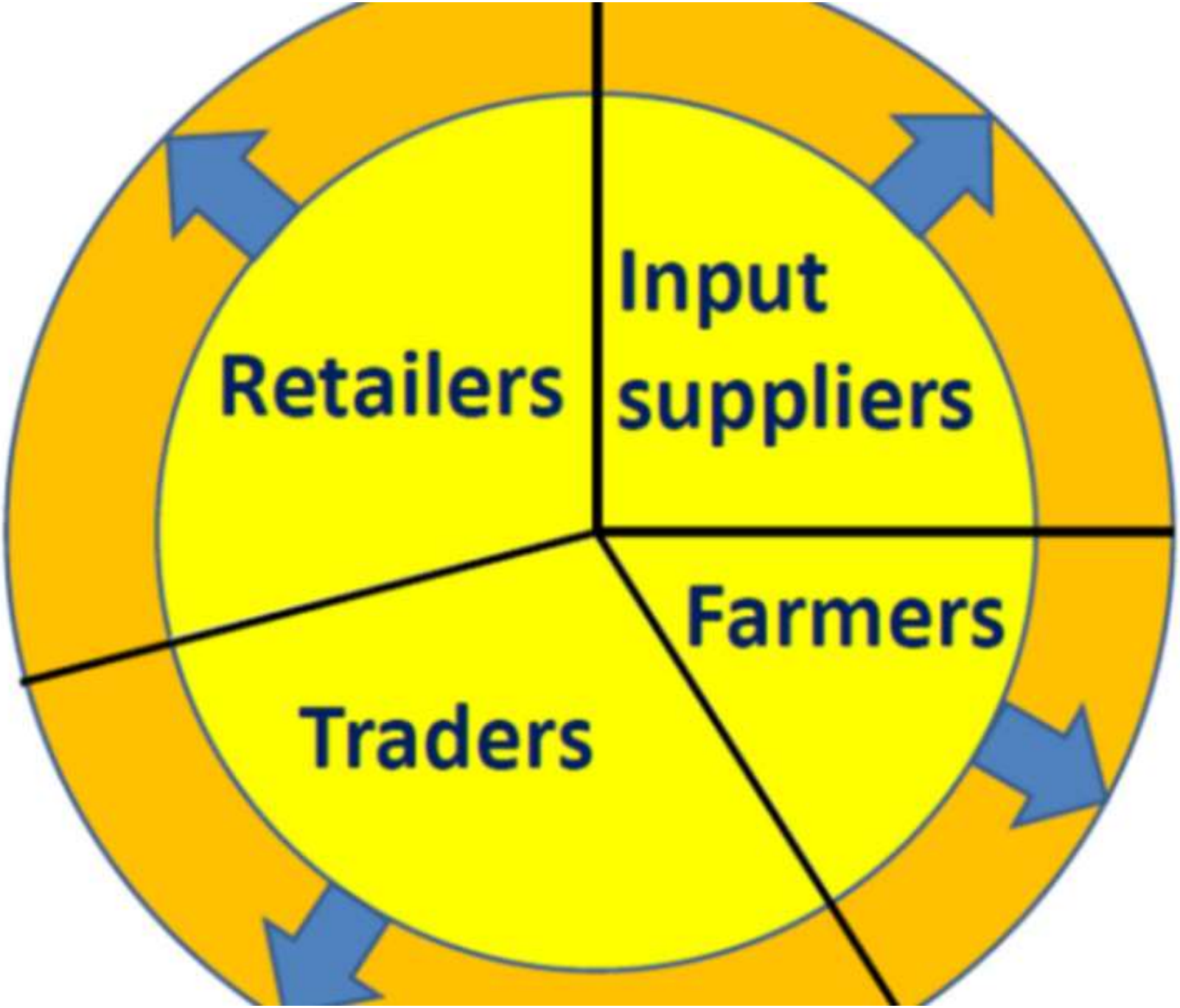
Supply chains

- Push products from upstream, with farmers adopting a production-focused attitude of “selling what they produce”;
- Products do not reflect the specific requirements of market segments and consumers decide what to buy mostly on price, rather than on their preferences;
- As a result, everyone has to make his slice of the pie bigger by making someone else’s slice smaller;
- There is neither trust nor commitment.


Retailers
Input suppliers
Farmers
Traders

Value chains

- Product is pulled by consumers, with farmers adopting a market-oriented attitude of “producing what they can sell”;
- Everyone works towards supplying the same market opportunity and avoids competing solely on price;
- The pie gets bugger with everyone’s slice growing without stealing part of someone else’s;
- Relationships are stable and stronger, with greater collaboration and sharing of information (Collins et al., 2015).


Retailers
Input suppliers
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Traders

Supply chain	Value chain
Compete on price	Compete on value
Independence and self-interest	Interdependence and mutual interest
Flexible, transaction relationship	Stable,, collaborative relationship
Short-term trading	Long-term planning
Suppliers chosen on quality and cost	Suppliers selected for quality, skills, service and partnership
Suppliers are price takers	Price negotiated
Opportunism	Commitment
Limited information sharing	Open communication

Horticulture production, current mln US$

	2000	2005	2010	2014
KAZ	487.9	894.9	1641.0	2580.5
TAJ	166.2	472.7	1018.3	1835.1
AZE	188.6	332.0	1764.8	1507.3
KYR	129.0	237.4	483.6	924.0
TUR	462.8	682.7	395.5	613.3

Growth rates (2000=100%)

	2005	2010	2011	2012	2013	2014
TAJ	284	613	814	981	1120	1104
AZE	176	936	822	871	904	799
KYR	184	375	538	434	595	716
KAZ	183	336	501	498	555	529
UZB	124	217	233	258	280	306
GEO	168	86	121	106	155	155
TUR	148	85	99	108	121	133

	Potatoes,current mln US$						
	2000	**2005**	**2010**	**2011**	**2012**	**2013**	**2014**
KAZ	219.3	416.2	781.2	1268.3	965.3	1082.7	991.4
KYR	83.1	134.1	282.8	423.3	301.6	444.2	520.8
AZE	77.0	132.9	594.1	487.3	493.1	484.7	408.4
TAJ	27.0	113.8	295.1	468.0	313.8	363.6	273.5
TUR	45.9	148.8	117.5	146.3	165.0	188.1	209.7
	Tomatoes, mln US$						
KYR	83.1	134.1	282.8	423.3	301.6	444.2	520.8
KAZ	91.6	112.0	216.0	274.9	495.6	495.3	453.9
AZE	17.3	18.5	470.5	457.6	492.2	485.0	416.7
TAJ	32.3	115.3	105.6	105.6	109.5	120.0	112.8
TUR	146.2	129.2	66.2	77.8	88.7	99.8	110.0
	Cucumbers and gherkins, mln US$						
KAZ	54.5	113.3	112.3	141.8	185.3	198.3	208.8
AZE	7.5	33.3	124.4	110.1	133.8	133.6	130.6
KYR	2.9	9.4	20.1	27.9	31.1	52.6	42.1
TAJ	1.5	13.7	14.3	14.6	13.8	45.3	49.8
TUR	10.4	10.0	5.5	6.5	7.2	8.1	9.0

	Onions dry, mln US$						
	2000	**2005**	**2010**	**2011**	**2012**	**2013**	**2014**
KAZ	17.6	36.2	94.4	152.7	151.2	129.5	130.4
TAJ	11.8	26.5	117.3	14.9	93.2	113.5	107.8
AZE	8.3	21.6	96.8	60.1	74.0	70.3	75.4
KYR	10.5	17.6	38.9	52.1	42.0	41.8	57.4
TUR	24.4	72.0	42.4	36.2	35.8	36.0	36.1
	Cabbages and other brassicas, mln US$						
KAZ	28.9	51.6	94.2	143.2	101.5	132.7	111.8
AZE	4.9	15.2	36.3	63.4	69.0	62.4	38.5
KYR	5.4	17.6	20.7	41.0	24.4	33.8	28.7
TAJ	1.1	9.0	22.6	25.3	28.3	31.5	33.3
TUR	16.0	19.0	11.3	12.7	14.4	16.2	17.8

	Watermelons, mln US$						
	2000	**2005**	**2010**	**2011**	**2012**	**2013**	**2014**
TAJ	12.5	29.4	165.2	275.5	392.6	430.4	466.2
KAZ	14.7	34.2	93.6	104.2	113.4	152.9	163.9
TUR	77.8	57.5	30.5	32.1	30.3	35.8	38.2
	Apples, mln US$						
TAJ	26.9	57.1	64.1	119.3	184.3	197.3	201.6
AZE	38.8	57.8	160.9	141.2	149.4	213.8	180.2
KAZ	14.3	22.6	40.3	56.7	65.6	91.4	110.8
TUR	16.4	39.0	29.7	34.9	40.1	45.6	50.8
	Grapes, mln US$						
TAJ	41.4	62.4	53.9	100.7	176.4	190.5	201.7
TUR	116.8	167.7	62.6	75.7	81.0	88.6	95.0
KAZ	5.4	9.9	17.3	20.8	35.5	46.5	52.7
KYR	3.5	2.5	4.4	7.1	7.3	8.0	9.3
	Apricots, mln US$						
TAJ	1.6	7.5	8.2	16.3	38.0	40.9	42.3
AZE	5.4	6.8	39.3	38.8	17.4	30.5	26.0
KAZ	0.9	1.1	5.3	5.9	9.3	6.9	7.5

Main horticulture crops

A. Vegetables with high volume:

(1) potatoes - KAZ, KYR, AZE;

(2) tomatoes - KYR, KAZ, AZE;

(3) cucumbers and gherkins, (5) cabbages and brassicas - KAZ, AZE, KYR;

(4) onions - KAZ, TAJ, AZE.

UZB – tomatoes, carrots and tumips, potatoes, onions, watermelons, cabbages and brassicas, cucumbers and gherkins

A. Fruits with high volume:

(1) watermelons and (4) apricots - TAJ, KAZ, TUR;

(2) apples - TAJ, TUR, KAZ;

(3) grapes - TAJ, TUR, KAZ.

UZB – apples, apricots, grapes, peaches, and nectarines.

Horticulture in Central Asia

- Horticultural industry which largely depends on smallholder farmers has been one of the most dynamic agriculture subsectors of the region's economy over the last 15 years;
- It is the fastest growing agriculture subsector with higher returns and creation of employment;
- Cultivation of fruits and vegetables is substantially more labor intensive than cereal crops and offers significantly more post-harvest opportunities for processing with value added.

$500 mln US$ loan of WB to UZB

- The objective is to enhance the productivity and profitability of horticulture sector which shows global potential: UZB is among the top five producers of apricots, the 6th largest producer of cherries and 17th in apple production;
- Move toward a more diversified and private sector-led economy;
- A gradual shift from the traditional crops (cotton, wheat) to a more liberal and diversified agricultural sector;
- Horticulture is an important source of all-season jobs in rural areas and a significant employer of women.