UNIVERSITY OF CENTRAL ASIA
GRADUATE SCHOOL OF DEVELOPMENT
Institute of Public Policy and Administration

Study of the kidney beans value chain and export capacity in the Kyrgyz Republic

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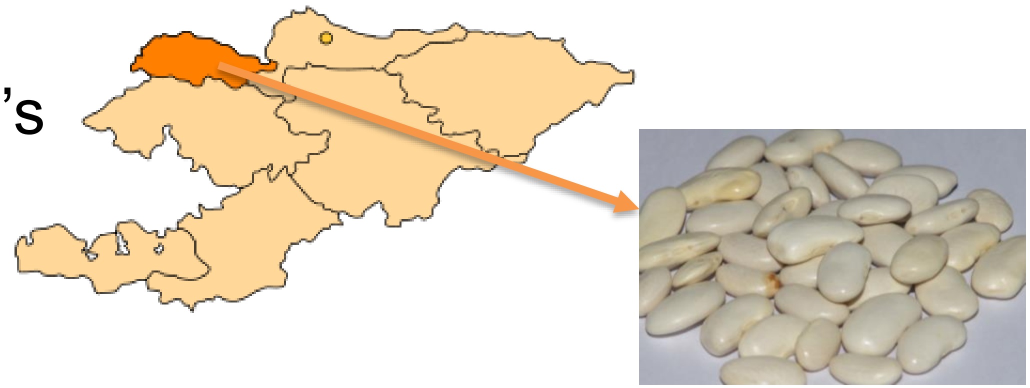
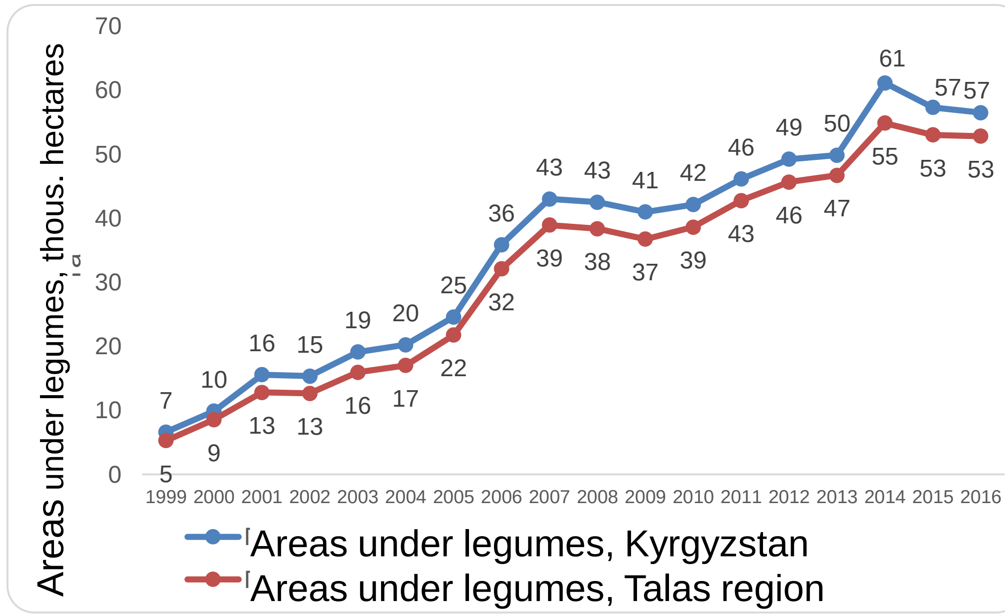
Beans in Kyrgyzstan

- Kidney beans were a minor crop until beginning of 2000's
- After 2005 beans have become key agricultural export item (26% in 2015)
- Talas Oblast is the center of beans production and exports (93-95%)
- Cultivated area on beans increased 8 times (1999-2016)
- Decrease in poverty and unemployment in Talas directly linked to beans

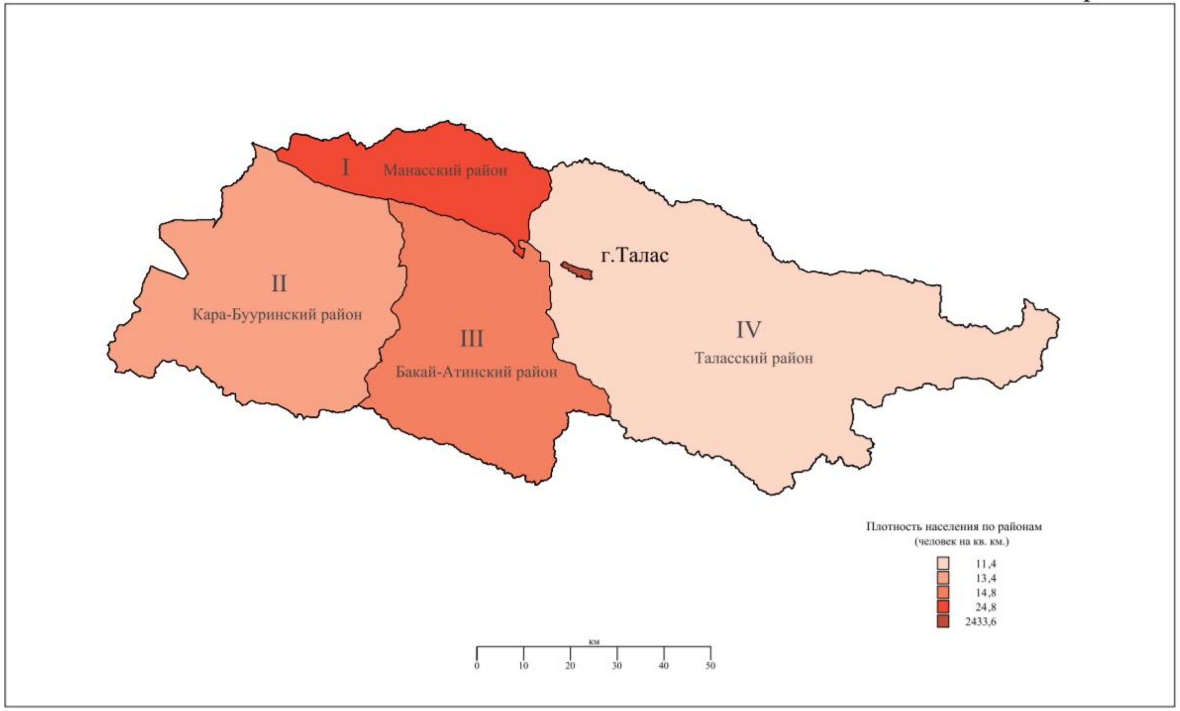




Main export markets – Turkey, South Europe

Beans in Kyrgyzstan (2) – Talas region impact

- Population – 244.1 thousand
- Rural population – 85%
- Gross Regional Product (2014) – KGS 13.5 billion (3.3% of GDP)
- Per capita GRP – KGS 57 thousand (3rd among all regions)
- Poverty and unemployment decline

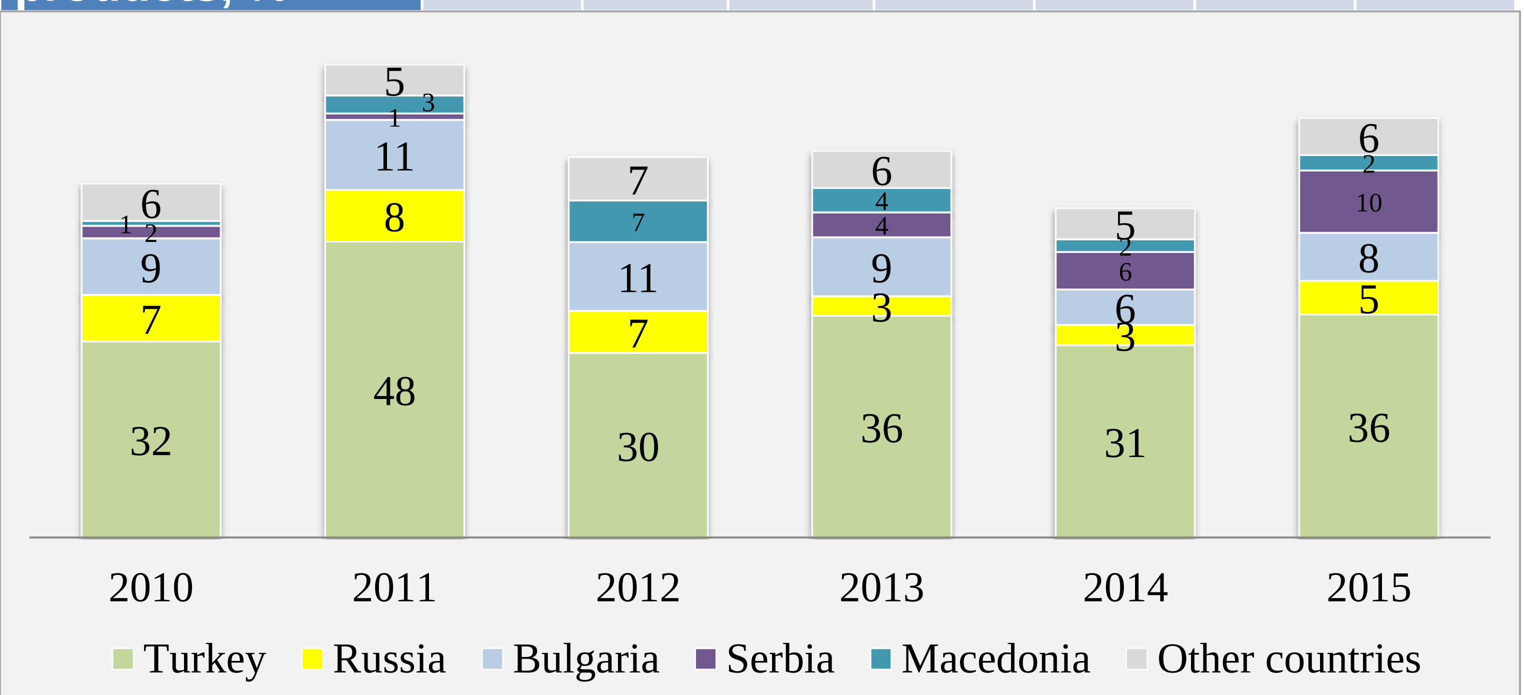


		Meas. unit	2008	2009	2010	2011	2012	2013	2014	2015
Poverty level	Kyrgyz Republic	%	31.7	31.7	33.7	36.8	38.0	37.0	30.6	32.1
	Talas Region	%	43.0	33.0	42.3	50.2	39.6	23.1	19.0	21.5
Unemployment level	Kyrgyz Republic	%	8.2	8.4	8.6	8.5	8.4	8.3	8	7.6
	Talas Region	%	5.4	4.9	5.1	5	4.1	3.7	3.9	3.3

Beans in Kyrgyzstan (3) – Export

	2009	2010	2011	2012	2013	2014*	2015
Export of beans, mln. USD	29.6	35.1	51.8	48.2	73	62	43.7
Export of beans, thousand tons	53.3	57	76.4	61.4	61.7	53.1	66.7
Share of beans in the export of agricultural products, %	16%	16%	20%	18%	27%	26%	26%

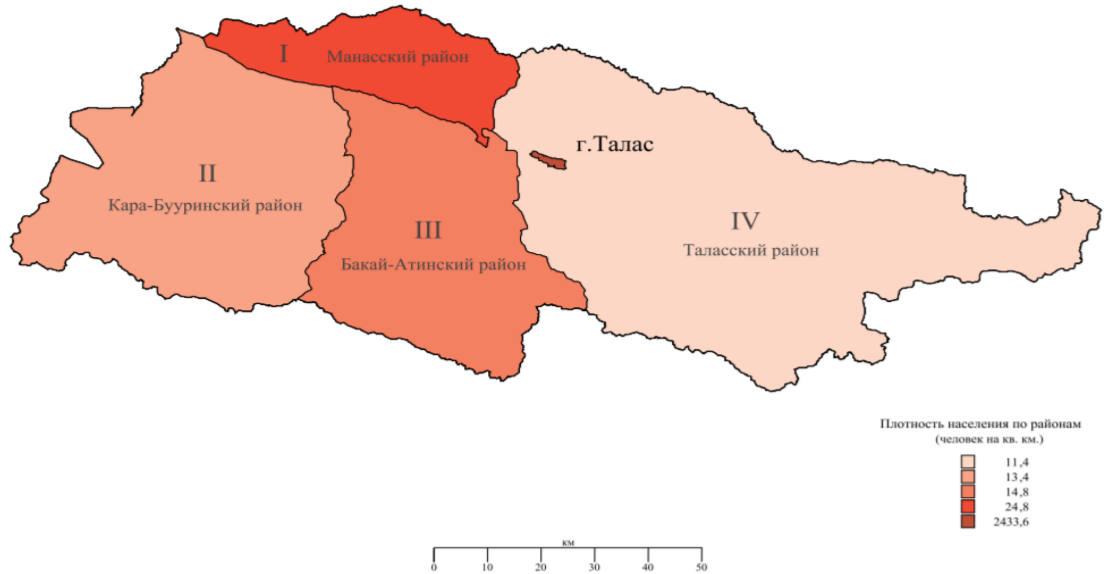
Total exports, agricultural exports and a share of beans exports in 2009-2015.



Beans exports from Kyrgyzstan to the major markets in 2009-2015.

The study – Kidney Beans Supply Chain

- Qualitative research with elements of quantitative methods
- Date - November 2016 - January 2017
- Research area – Bakai-Ata and Kara-Buura District
- The sample covers all links in the supply chain of beans



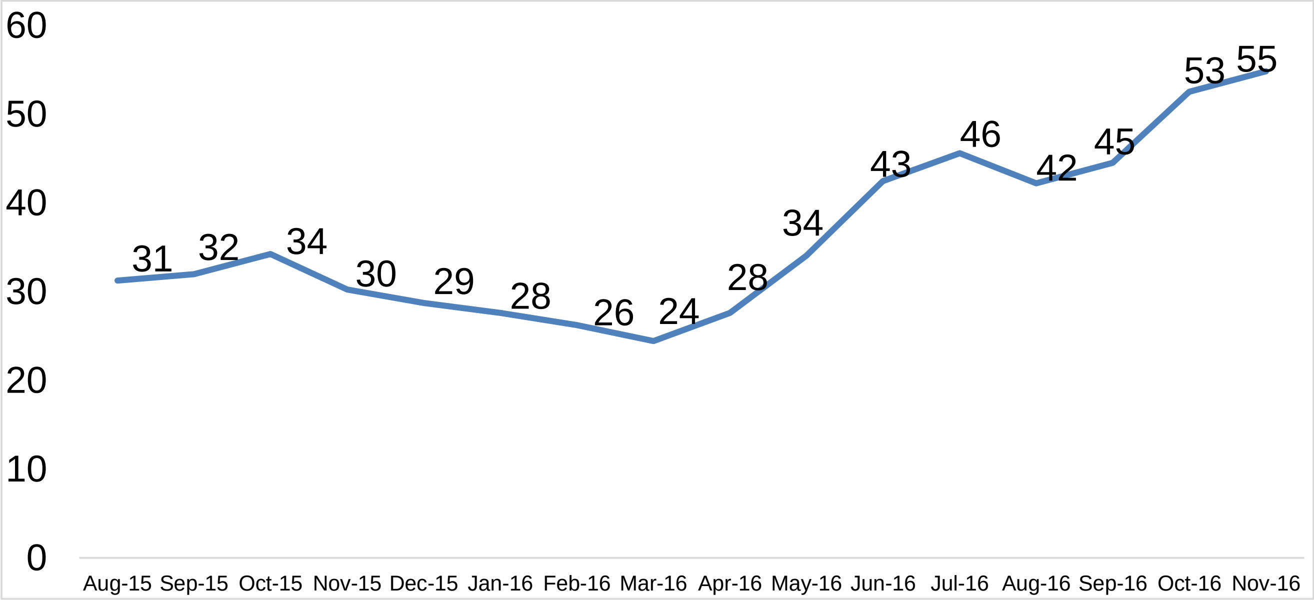
Farmers	40
Bean collectors	10
Resellers	10
Exporters	5
Transport agents	2
Bean cleaning workshop	3
Total	70

Bean Farmers

- Beans are a monoculture that is cultivated by farmers on one land plot
- Main source – own seeds, market and neighbors
- Main variety – white kidney bean (over 60% of all beans) for export to Turkey and Bulgaria
- Main cultivation stage:
  - Planting: April - May
  - Watering: 3-4 times
  - Cultivation: 2 times
  - Harvesting: August-September
- Widely used own and hired manual labor and mechanized works
- Important factors of productivity – agricultural machinery, irrigation, use of fertilizers and agrochemicals, absence of crop rotation

Bean Farmers (2)

- Beans stored up to 2 years in a dry conditions
- Beans sold during 3-4 months after harvesting
- Farmers (buyers of beans or dealers, not exporters) are the main sales channel
- The post-harvest processing of beans – manual cleaning and sorting the harvest
- Uncleaned beans valued below market price (2 to 6% of weight)
- 2016 price increased 2015 price by 67%
- Prices of different varieties of beans differ by 10-20%



Farmers - Purveyors

- Bean farmers are also work as collectors - purchase beans for further reselling
- Farmer- purveyors work on a village level
- Average turnover per season: 200-250 tons
- Clients - wholesale buyers (3 to 5)
- Average size of bulk: 20 to 80 tons
- Terms of purchase: current market price, sorting, dry beans
- Beans cleaned by order
- Loading unloading services cost
- Margin of a bean collector - 3-5 KGS/kg (2-2.5%)
- The competition is high: 5-6 bean collectors in each village
- Many collectors are looking for investors to increase capital factor

Commercial Dealers

- Commercial dealers are main wholesale agents in the buying and selling beans
- It is their main business they develop last 10-15 years
- Hire constantly 3 to 10 workers
- Gross margin is KGS 2 to 6 million a yea; 3,000-3,500 tons of beans per season
- Assets:
  - Warehouse (50 to 1,500 m2)
  - 2 to 5 vehicles (trucks and passenger cars)
  - equipment for the cleaning and sorting of beans
- One dealer cover 20 villages on an average; 2-3 districts
- Each village has a 1-2 bean collection points (farmer-purveyors)
- Dealers collect beans from 1 thousand farmers per season

Bean Cleaning Services

- Bean cleaning workshops are developed as a value chain stage
- All of them buy and sell beans, as well as provide bean-cleaning services
- Manual labor cleaned services (1 ton/day) and modern new equipped workshops (30 ton/day) exists on the market
- Permanent staff ranges from 5 to 30 people, depending on a season
- Workshop has a warehouse (100 to 8,000 m2), own transport commercial vehicles and equipment for the cleaning and sorting of beans

Exporter

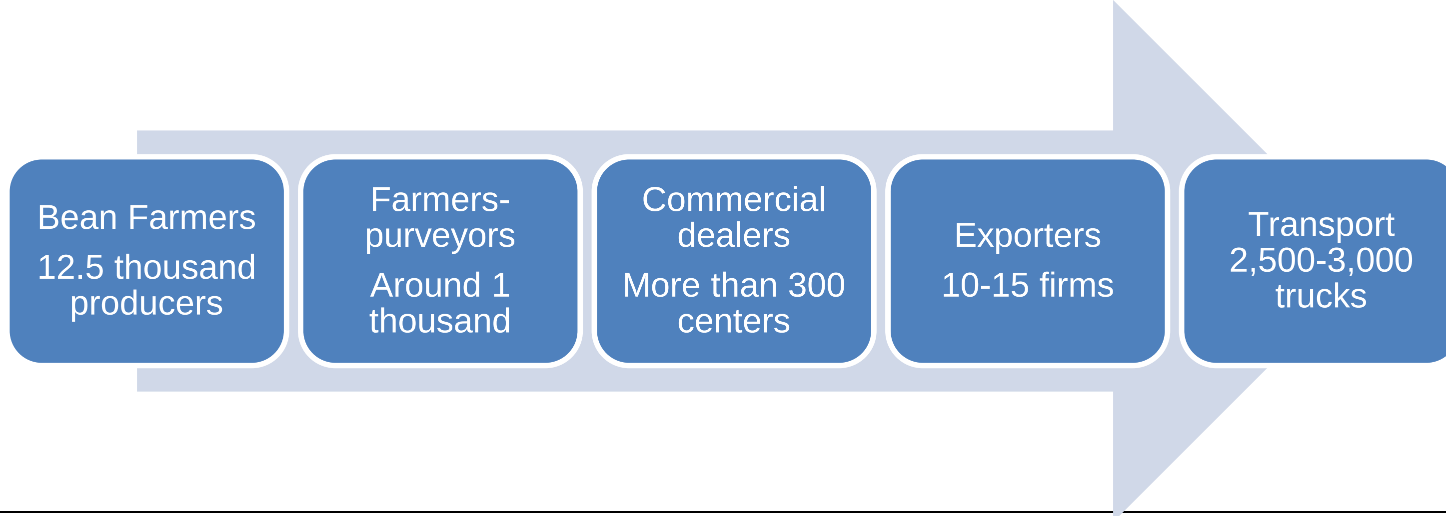
- Exporter is a key stage in the value added supply chain
- 60 companies registered, but main players are 10-15 companies
- Exporting firm employs few workers to control process and quality of beans, registered as companies
- Average turnover 8-9 thousand tons of beans
- Most of firms have founders – Turkish citizens or Turkish companies
- Average supply bulk of beans is 100-110 tons
- Beans are collected through dealers (10-20 agents)
- Firms representative or hired intermediary prepares documents to export (certificates, declaration, contract, laboratory certificate) for each bulk of beans
- Exporters margin is 10-15% of purchased price
- Influence of accession of Kyrgyzstan to the EAEU is evaluated as positive

Transport companies

- Transport operators are mostly foreign companies
- Kazakh trucks supply to Russia, The cost of shipping to Russia is USD 2,000-2,400.
- The route runs through:
  - Taraz - Chymkent - Atyrau - Astrakhan
  - Destination: Southern Federal District (Rostov-on-Don, Krasnodar)
  - Duration: 3-4 days

- Turkish transport companies occupies the European markets
- The cost of shipping to Europe is USD 4,000-5,000.
- The route runs through:
  - Kazakhstan – Russia (Taraz - Chymkent - Atyrau - Astrakhan) – Georgia – Turkey (7-8 days)
  - Kazakhstan – Russia (Taraz - Chymkent - Atyrau - Astrakhan) – Georgia – Turkey – Bulgaria (10 days)
  - During the flare-up between Russia and Turkey, goods were transported across the Caspian Sea by ferry via the port of Aktau (Kazakhstan) – port of Baku (Azerbaijan) – further to Georgia and Turkey

Beans Value Chain Structure



Forecast of beans export	65000					
	Farmers-bean	Farmers-purveyors	Wholesalers	Bean cleaning	Exporters	Transport
Gross margin	62%	3%	4%	3%	14%	13%
Gross margin of intermediaries - value chain particiants		38%				

Why Talas can be success story?

1. Historical determinant - In Talas exists group of farmers (Kurds) having an experience of cultivating beans in the region and disseminating it to Kyrgyz farmers.
2. No other alternatives for farmers to explore during that time.

Other factors important, but not unique in the country context

Obstacles and constraints for the beans in Kyrgyzstan

- No more available arable land in the region
- Smallholder producer trap - no economy of scale effect for the farmer with 2 hectares of land
- Limited knowledge of farmers reduces productivity gains despite high farmers’ demand
- Bean prices on the world market are volatile and farmers can experience significant change of the price
- Threat of a plant diseases and insects invasion
- No climate change scenarios on the farmers level

Policy Recommendations - State

- Support service cooperatives and private sector to supply improved seeds and fertilizers
- Analyze and prepare program to expand beans to other suitable regions
- Improve knowledge base in agronomy, post – harvesting, plant protection systems on the bean farmers level
- Improve plant protection system - control and monitoring of the quality of fertilizers, herbicides and pesticides
- Increase knowledge on beans production and marketing on the Government level – R&D program for beans
- Support promotion of beans to a new markets
- Increase attention of a child labor and gender issues in the region

Policy Recommendations (2)

Farmers

- Develop service cooperatives, increase social capital institutional settings to improve overall efficiency to gain an economy of scale effect
- Increase an efforts on new knowledge system building for farmers - agricultural technologies, plant protection systems, improved inputs

Development Organizations

- Focus on R&D to support state and farmers in improving knowledge base
- Support state agencies to disseminate knowledge
- Increase an attention on child labor and women rights

Thank you

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