REPORT

ON FRUITS AND VEGETABLES PROCESSING SECTOR STUDY IN KYRGYZSTAN

Bishkek, 2012

PROJECT CUSTOMERS

The report on fruit and vegetable processing sector study in Kyrgyzstan was prepared on request of:

"Local Market Development" Project, implemented by **Helvetas** – Swiss Association for International Cooperation in Kyrgyzstan and **ICCO** – Dutch Interchurch Cooperation Organization

Association of Fruit and Vegetable Processing Enterprises

Organization, which unites most of fruit and vegetable processing enterprises in Kyrgyzstan, developing sector of fruits and vegetables processing by creating favorable business environment and development market of processed products.

PROJECT PERFOMERS

The Center of Training & Consulting LLC UK

British training and consulting company specialized in strategic development of the enterprises in central-Asian region, Kazakhstan and Russia (private, state owned, international and public associations) striving for growth and prosperity

"AgroInformAsia" LLC

Consulting company that performs work on development and promotion of Agricultural Information Marketing System (AIMS).

Company is working on gathering information: on products that farmers and processing enterprises produce in Republic during the current season, on wholesale and retail prices at Bishkek markets.

Content

Objectives of the study 6
Methodology 6
Production 8
Production capacity 9
Processed raw materials 15
Products 17
Infrastructure 21
Conclusion 23
Raw materials base 24
Purchases of raw materials 24
Assessment of the situation 26
Conclusion 30
Enterprise management 31
Activities in management 31
Human Resource Management 35
Statistics on staff 36
Conclusion 38
Marketing 39
Trade marks, sold products, assortment 39
Sales markets 41
Foreign trade operations 45
Export 46
Import 50
External markets: opinion of enterprises 53
Promotion and Distribution 56
Competition 58
Conclusion 61
Funding 62
Conclusion 65

Integration 65

External environment 67

Companies finances 70

List of tables

Table 1. Production volumes in the sector in 2008-2010. 8
Table 2. Equipment purchased by enterprises over the past three years 11
Diagram 3. Plans of enterprises on equipment purchasing 12
Table 4. Distribution of production of commodity groups 19
Table 5. Volume of raw materials purchases in 2011. 24
Table 6. Opinions of the enterprises on the distribution of the roles in solving the problems with raw material base 29
Table 7. Readiness of enterprises to solve the problems of raw material base 29
Table 8. Assistance required for the enterprises in solving problems of raw material base 30
Table 9. Distribution of responsibility for the key management functions 31
Table 10. . Objectives of enterprises 33
Таблица 11. Problems in the management of enterprises 34
Table 12. Geographical sales markets of surveyed enterprises broken down by region, 2011 43
Table 13. Export of dried fruits and vegetables 48
Table 14. Export of fruit juice 48
table 15. Export of canned vegetables 49
Table 16. Import of fruit juice 52
Table 17. The most and the least profitable products according to the enterprises evaluation; number of enterprises 71
Table 18. Cost articles shares in the unit cost of product 72

List of Diagrams

Diagram 1. Number of enterprises surveyed by regions 6
Diagram 2. Sources of financing of equipment purchases 12
Diagram 3. Types of processed raw materials 15
Diagram 4. Types of manufactured products 18
Diagram 5. Map of production, number of enterprises 21
Diagram 6. Used models of interaction with raw material suppliers 26
Diagram 7. Assessment of raw material supply problems by enterprises 28
Diagram 8. Horizons of the development plans of enterprises 32
Diagram 9. Needs assessment of key professionals 35
Diagram 10. Evaluation of demand for the products given by enterprises 39
Diagram 11. Plans of enterprises in terms of changing assortment 40
Diagram 12. Planned changes in assortment broken down by types of products 41
Diagram 13. Geographic sales markets in 2011, number of enterprises 42
Diagram 14. Evaluation of changes at domestic market given by enterprises for the period 2008-2011. 42
Diagram 15. Priority sales markets, number of enterprises 45

Diagram 16. Volume of foreign trade operations 45
Diagram 17. Structure of export broken down by product types, 2008-2011. 46
Diagram 18. The structure of export broken down by countries, 2008-2011, ... 50
Diagram 19. Structure of import broken down by product types, 2008-2011. 50
Diagram 20. Geographic structure of import, 2008-2011. 53
Diagram 21. Evaluation of supply problems to the outside markets given by enterprises 54
Diagram 22. Evaluation of the change in the situation at the outside markets given by enterprises for the period 2008-2011. 55
Diagram 23. Use of various ways to promote the product by enterprises 56
Diagram 24. Evaluation of products promotion ways effectiveness given by enterprises 57
Diagram 25. Distribution channels used by enterprises 58
Diagram 26. Competitors at domestic and outside markets, the number of mentions 60
Diargam 27. Comparison of quality and packaging of products with competitive analogues 61
Diagram 28. Number of applications for external funding sources made by enterprises 63
Diagram 29. Opportunities of the integration in the activity of the enterprises 65
Diagram 30. Evaluation of the role of donors project 68
Diagram 31. Evaluation of support from government agencies side 69
Diagram 32. Evaluation of Association of fruit and vegetable enterprises activeties 70

Objectives of the study

The first survey of the industry was held in 2003. As the result, in April 2004 analysis of fruits and vegetables processing sector was completed. Future, based on this analysis, the strategy of sector development was elaborated for the period from 2004 to 2007.

The following report was made on the basis of interviews conducted in the spring of 2008. Its main purpose was to determine the nature of the changes in the sector from 2003 to 2007. These reports have also been used in the preparation of an updated strategy of sector development for the period from 2008 to 2012.

This report is based on research conducted in the spring of 2012 and pursues the same objectives: to identify the changes and assess the situation on various aspects of industrial processing of fruits and vegetables:

- Production;
- Provision of raw materials;
- Marketing and sales;
- Provide funding;
- Management of the enterprise;
- Finance of companies;
- Environment and integration processes.

Methodology

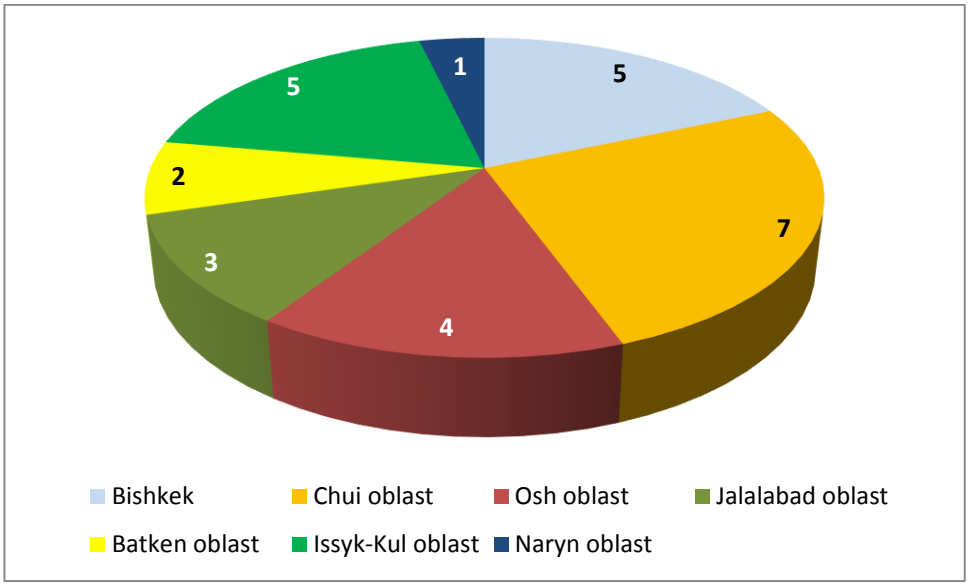
The following methods and approaches were applied upon conducting the study:

1. Analysis of the results of in-depth interviews with representatives of target groups (leaders of fruits and vegetables processing enterprises).

In total 32 companies were interviewed, one of which at the time of the survey only prepared to start to work.

Information was collected by in-depth interviews. The study was conducted according to a previously prepared and approved by the customer questionnaire.

Diagram 1. Number of enterprises surveyed by regions



1. Data and analysis of official statistics (production, individual types of raw materials, export-import operations).

Production

Table 1. Production volumes in the sector in 2008-2010.

	2008	2009	2010
Fruit and vegetable juices, total, thousand liters	**5 741**	**7 247**	**6 951**
Jalalabad oblast			5
Issyk-Kul oblast	604	581	650
Osh oblast	254	113	3
Chui oblast	352	681	1 050
Bishkek city	4 532	5 873	5 243
Tomato juice total, thousand liters	**151**	**381**	**46**
Batken oblast	17	125	46
Chui oblast	135	256	0
Dried vegetables and mushrooms, total, tons		**14**	
Bishkek city		14	
Canned vegetables and mushrooms, total, tons	**1 789**	**2 294**	**2 301**
Jalalabad oblast	1	37	3
Osh oblast	53	284	111
Chui oblast	1 514	1 798	1 659
Bishkek city	92	73	412
Batken oblast	128	102	118
Canned fruit, jam, jelly, total, tons	**171**	**81**	**269**
Jalalabad oblast	15	1	3
Issyk-Kul oblast	62	3	127
Osh oblast	34	2	2
Chui oblast	24	18	28
Batken oblast	37	57	110

There was the increase of fruit juices production (drop in 2010 was only 4%, mainly due to reduced production in Bishkek). Thus, the production of fruit juices in general are growing, since 2003[1].

Production of tomato juice demonstrated an increase from 2003 to 2007, followed by a fall. The volume of tomato juice in 2010 was only 13% out of the volume in 2007.

According to the official statistics, almost completely stopped the production of dried vegetables and mushrooms. Production volume for a given position in the period from 2008 to 2010 was only 9% out of the volume for the period from 2005 to 2007.

There was an increase in production of canned vegetables. Since 2007, the volume of production for this position has grown by 1.6 times.

Production of canned fruit declined from 2003 to 2007 (by 76% over the period), whereas for the period reviewed, in general, increased. According to the survey, many

[1] Data on production volumes in 2003-2007. See Appendix

companies, particularly in the Issyk-Kul region, rely on the development of their own farms and orchards and in coming years can be expected as minimum stable amount both in this position, and on fruit juices.

Production capacity

Eight enterprises out of respondents (N = 32, 25%) operating during the entire calendar year. On average, surveyed companies operate 6.9 months a year. One company has not yet started to work at the time of survey.

Annual duration of operation period for the enterprises

Operation period during the year, mo	Number of enterprises
12	8
From 6 to 9	8
5	4
4	6
3	5

Are 16% of companies surveyed are working three months a year. The duration of the season from 6 to 12 months in a year have half of the surveyed enterprises. These indicators have improved markedly since the previous analysis[2]. In 2008 only 10 enterprises (less than 30% of respondents) had such duration of their work.

The total production area of the enterprises surveyed is 46.13 hectares. On average, one company has 1.44. ha. of production area.

Production area of enterprises

Production area, ha	Number of enterprises
from 6 to 9	2
from 2 to 3,5	4
from 1 to 1,75	7
Less then 1	19

Seven enterprises have noted the availability of their own areas for raw materials (mainly gardens), with the total area of 95.2 hectares.

One of the enterprises is planning to buy land to build a new plant.

Direct comparison of the production area (as well as other indicators in this section) with the previous report is incorrect, since there have been changes in the composition of survey participants. However, the trend of consolidation area, and it is under the land used for raw material is clearly seen.

[2] Here and below "previous analysis" or "previous record" - refers to a report on the study of the sector, prepared in 2008

On average, enterprises are constantly uses 52% of the production area

Use of production areas

Use of production area	Number of enterprises
100%	8
from 50% to 80%	10
from 30% to 40%	9
from 10% to 25%	5

During the processing plants use up to 72% of production space. This corresponds to 33.3 hectares of the total production area available for enterprises (an average of 1 ha to the plant).

Use of production areas during the processing period

Use of production area	Number of enterprises
100%	17
from 50% to 80%	9
from 30% to 40%	5
15%	1

Equipment of enterprises during the period of processing uploaded by an average of 62%. Fifteen enterprises the percentage of the equipment loading in a given period below the average in the sector, and the equipment of three companies loaded only by 5-15%.

Loading of enterprises equipment during the period of processing

Percentage of equipment loading	Number of enterprises
100%	9
from 60% to 90%	8
from 50% to 55%	5
from 27% to 35%	7
from 5% to 15%	3

Loading of enterprises equipment during the period of processing increased. Together with the increase of operational season of enterprises during the year it is certainly positive change.

Operational life of equipment

Operation life of equipment, years	Number of enterprises
30-40	4
19-28	10
10-15	8

2-5	11

There has been a gradual "rejuvenation" of enterprises equipment. For example, in 2008 only at 6 of surveyed companies average operational life of equipment ranged from 2 to 5 years, whereas at seven enterprises the average operational life of equipment reached 30-40 years.

The average operational life of equipment of all surveyed enterprises was 17.2 years.

The degree of physical deterioration of the equipment on the surveyed companies was on average 27%.

Physical deterioration of equipment

Deterioration, %	Number of enterprises
100%	4
from 50% to 70%	6
from 30% to 40%	6
from 10% to 15%	5
Less then 10%	11

The oldest equipment at the surveyed enterprises was released in 1941, yet another company - in 1970. The newest equipment with surveyed enterprises was manufactured in 2010.

Over the past three years, as well as in the period from 2005 to 2007, production equipment acquired two-thirds of the surveyed enterprises. As anticipated in 2008, during this period the most popular equipment was can lid closing machine for twist off lids

Table 2. Equipment purchased by enterprises over the past three years

Item of equipment	Number of enterprises that purchased equipment
can lid closing machine for twist off lids	3
line for PET bottles	2
line for bottling juices	2
line for yoghurts	1
packing equipment	1
Washing machine for fruits and vegetables	1
dater	1
pump for pumping dense masses	1
centrifugal pump	1
system for pouring into a tin can	1
line for production of mayonnaise	1
production line for ketchup	1

automated bottling machine	1
drying oven (infrared drying)	1
Machine for cutting fruit	1
equipment for heat treatment of dried fruits	1
shock refrigeration unit	1
Milk-pak	1
aseptic line	1
extruder	1
cooling unit	1
storage tank of juice	1
machines - Refrigerators	1
line for seaming and pouring tomato paste	1
thermo-packaging equipment	1
cooking boiler	1
mixer	1
Spillage (auto)	1
autoclaves	1

Can lid closing machine for twist off lids remains the most popular equipment in the near future – the necessity of it primary purchasing marked five enterprises. Significantly – and just as expected – there is growing of enterprises interest in equipment for the juices production: the lines for the production and bottling of juices, aseptic lines and equipment for "tetra-pack." A quarter of surveyed enterprises do not plan to purchase equipment in the near future.

85% of equipment purchases was funded by enterprises at their own expense (including as an additional source). This is 20% increase on the results of the survey in 2008. Exclusively by external sources have been funded only 10% of purchases of equipment.

Diagram 2. Sources of financing of equipment purchases

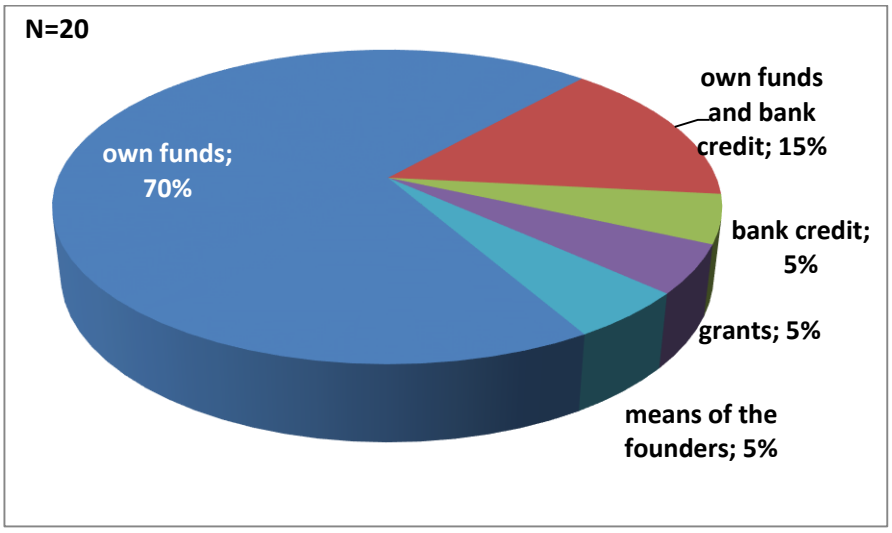


Diagram 3. Plans of enterprises on equipment purchasing

What equipment is it necessary to buy first of all (and / or what needs replacing or upgrading)?	Number of answers of enterprises	What is estimated cost to purchase (replacement, modernization) of this equipment (USD)?	Country (ies), producers of required equipment
can lid closing machine for twist off lids	5	17 thousand $	Germany, China
line for production and bottling of juices	4	150 thousand $	KR, Germany
equipment for the packaging of juices in tetra pack	3	80 thousand $ - 2-3 million $	China, Russia, Poland
aseptic line	3	up to 90 thousand $	Russia or Korea
capping machine	3	50 thous-d$ -1mill 700 thous-d $; 5 thousand $	Russia, Iran
washing equipment	2	up to 15 thousand $	Russia
equipment for cutting and cleaning	2	from 1 thousand $	Russia, Belarus, China
thermoshrinkable line	2	6,5 thousand $	China
refrigerating unit	1	10 thousand $	China or Turkey
cookers	1	2 thousand $	China
drying boilers	1	2 thousand $	Russia
juice line	1	5 thousand $	Russia or Germany
seaming and pouring line for tomato paste	1		China
Doy Pak line	1		
homogenizer	1	10 thousand $	Russia
drying unit	1		
line for concentrate production	1	3-5 million $	
fluidization cooling tunnel	1	240 thousand $	Switzerland
compensator	1	from 300 thousand KGS	second-hand (KR or RF)
Reservoir on 3 tons for juices storage	1	3 thousand $	Korea
sorting line	1	up to 15 thousand $	
line for vacuum-packed	1		
automated line for drying	1	15 thousand $	Russia or KR
bottling machine	1	60 thousand $	Russia
line for blowing of PET bottles	1	400 thousand $	China
line for pouring drinks	1	400 thousand $	China
production line of jams	1	60 thousand $	Russia or Italy
transport	1		
autoclave (sterilizer)	1	150-200 thousand $	Russia
batcher	1	35 thousand euro	Germany
pasteurizer	1	80 thousand euro	Russia or Germany
machine for filling	1	60 thousand euro	Russia or Germany
labeling machine	1	10 thousand $	China

The equipment produced in Russia still remains the most popular among enterprises. 14 companies named Russia as the country of manufacture of equipment they need. 11 companies are planning to give preference to equipment made in China. Interestingly, the six enterprises planning to acquire the German equipment (usually expensive), preferring it, for example, equipment from Turkey.

Mention of countries producers of equipment

Countries producing equipment	Number of references
Russia	14
China	11
Germany	6
Kyrgyzstan	3
Korea	2
Switzerland	1
Iran	1
Italy	1
Turkey	1
Belarus	1
Poland	1

Existing production capacity allows surveyed enterprises process 162 tons of raw material per day (an average of 5.1 tons per enterprise).

The volume of raw materials, which can be processed by enterprises

Volume of raw materials, tons (capacity)	Number of enterprises
100 and more	1
from 40 to 60	5
from 20 to 30	6
from 10 to 15	3
from 0,4 to 10	17

The volume of actually processed raw materials

Volume of processed raw material, tons	Number of enterprises
90	1
from 60 to 80	1
from 40 to 60	1
from 20 to 40	2
from 10 to 10	2
from 5 to 10	5
Less then 5	21

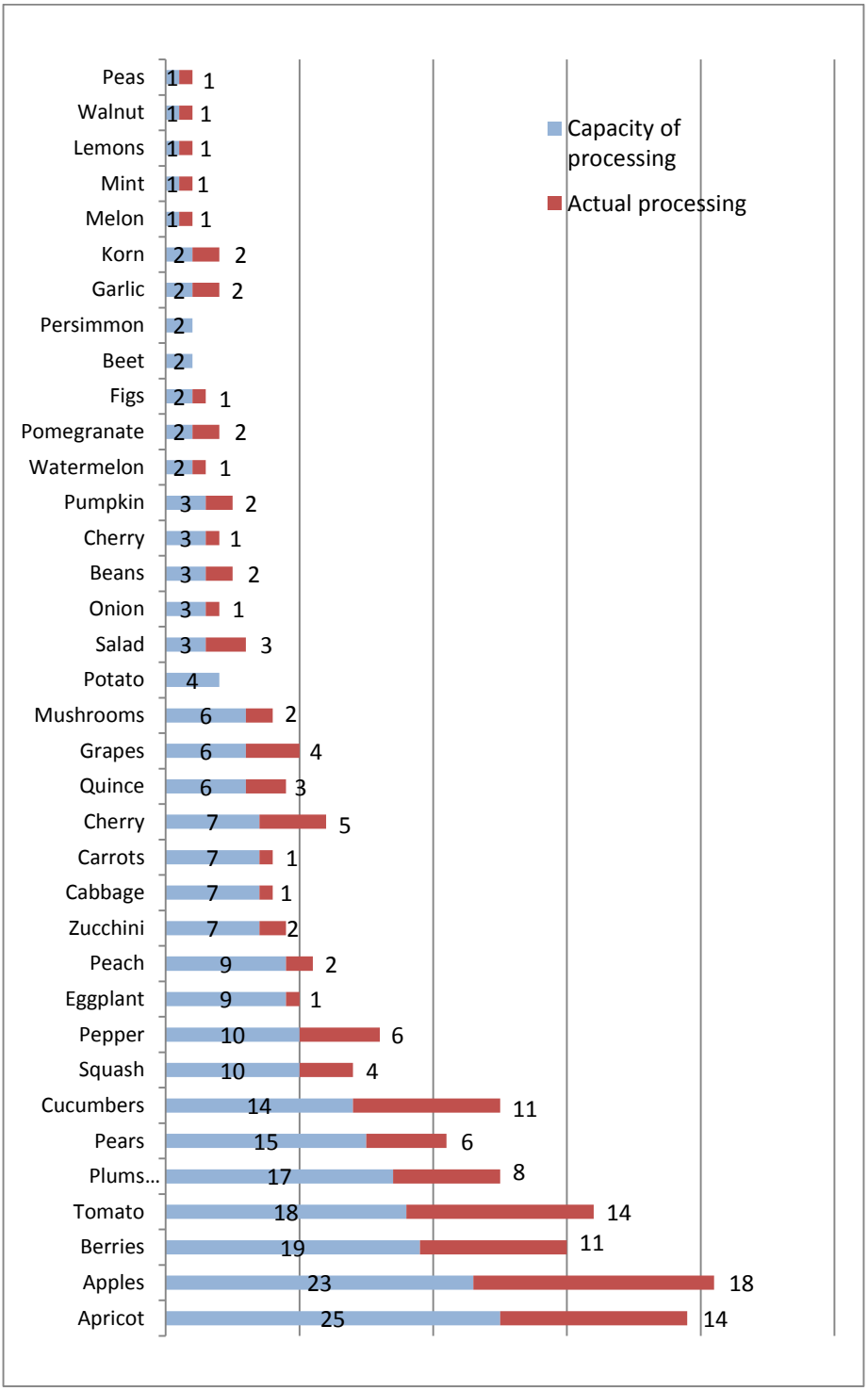
Processed raw materials

Interviewed companies can process 36 types of raw materials (fruits, vegetables, melons, berries, nuts, legumes, cereals). At the same time the possibility of plants for processing raw material are different. Only 19% of the surveyed enterprises can process 10 or more types of raw materials. However, 16% of companies surveyed can process at least five types of raw materials.

The number of types of raw materials (enterprises opportunities)

Number of raw material types processed by enterprises	Number of enterprises
from 15 to 19	2
from 10 to 13	4
from 5 to 9	20
from 2 to 4	3
1	2

Diagram 3. Types of processed raw materials



The actual processing of raw materials is significantly different from the opportunities that exist in the surveyed enterprises.

The number of actual processed types of raw materials

Number of raw material types actually processed	Number of enterprises
from 10 to 13	3
from 5 to 9	8

from 2 to 4	14
1	5

Thus, 63% of companies actually processed at least five kinds of raw materials. More than 10 kinds of raw materials processes, only one enterprise.

In general, the situation with the types of processed raw materials has improved compared to 2008. Thus, the amount of types of raw materials, which can be processed by enterprises has increased (there were 28 species). Also increases the number of enterprises that are actually processed more than 4 kinds of raw materials – in 2008 the figure was 25% of respondents, in 2012 it is 34%.

Products

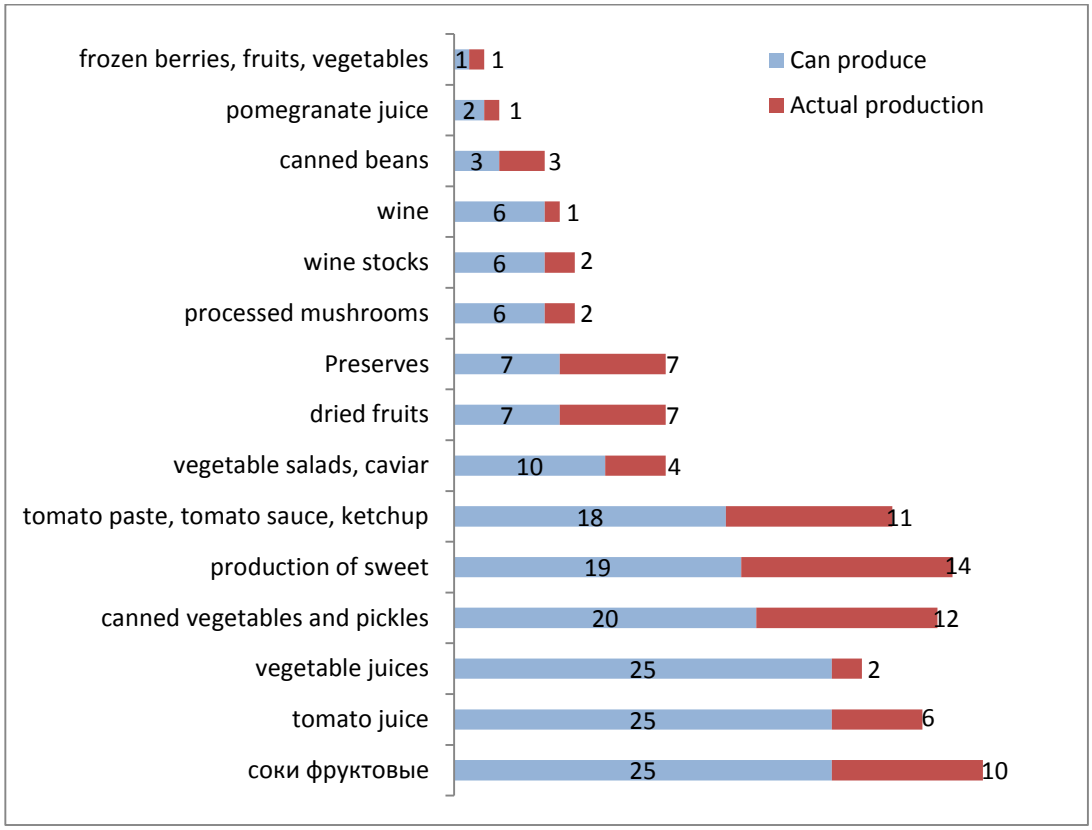
Enterprises has named 22 types of products[3] during the survey. Some types of the products combined into groups, i.e *the assortment* (of both potential and actual) is wide at the enterprises.

The number of produces types (potential)

Number of products types that can be made	Number of enterprises
9-10	4
from 5 to 8	9
from 2 to 4	11
1	7

[3] The report does not specify products, named by enterprises, but has no relation to fruit and vegetable processing (such as kvass, mayonnaise, corn products, etc.)

Diagram 4. Types of manufactured products



As well as four years ago, the number of enterprises actually producing these products significantly differs from the number of enterprises that have the capacity to produce it. If the number of enterprises that can produce up to 4 products is 58% from the total number of respondents, in fact 84% of surveyed companies produced not more than 4 kinds of products.

The number of actually produced types of products

Number of products types that made by enterprises	Number of enterprises
10	1
from 5 to 8	4
from 2 to 4	16
1	10

The situation both with the enterprises capability for the production of different products, and with the actual structure of production in comparison with the results of previous studies did not changed.

During further analysis types of manufactured products traditionally divided into 10 groups, including:

- Canned vegetables, pickles and mushrooms
- Compote
- Sweet group products, including fruit puree
- Fruit juices
- Vegetable juices
- Vegetable salad and paste
- Tomato paste, tomato ketchup and sauces
- Tomato juice
- Dried fruit
- Wine, wine materials and alcohol

Table 4. Distribution of production of commodity groups

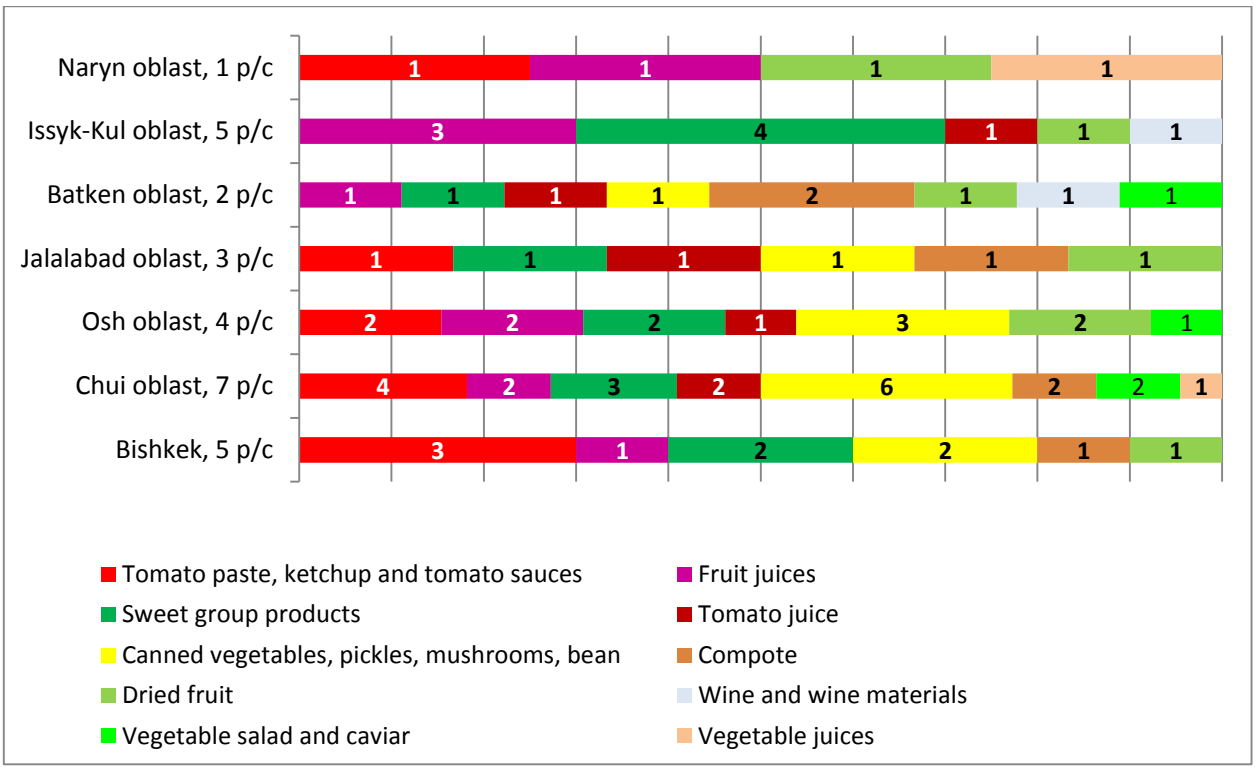
Commodity groups	Producer	Region
Tomato paste, ketchup and tomato sauce	Pamir FEZ "Bishkek"	Bishkek
	Osh fruit and vegetable plant	Osh oblast
	EUM	Osh oblast
	Zhashylcha	Chui oblast
	Baerkos	Jalalabad oblast
	Ramax	Bishkek
	Dessert	Chui oblast
	Sokoev	Bishkek
	Rich Stem	Chui oblast
	Ailana	Chui oblast
	Temir-Too	Naryn oblast
	Tokmak tinned food factory	Chui oblast
Fruit juices	Pamir FEZ "Bishkek"	Bishkek
	Osh fruit and vegetable plant	Osh oblast
	Yntymak	Issyk-Kul oblast
	Rahmonberdi	Osh oblast
	Tokmokplodoovosch	Chui oblast
	Dessert	Chui oblast.
	Agroplast	Batken oblast
	Temir-Too	Naryn oblast
	FAIR	Issyk-Kul oblast
	Koopromservis	Issyk-Kul oblast.
Sweet group	Osh fruit and vegetable plant	Osh oblast
	EUM	Osh oblast
	Kulikovsky cake	Bishkek
	Zhashylcha	Chui oblast
	Ailana	Chui oblast
	Yntymak	Issyk-Kul oblast
	Lesnoy product	Jalalabad oblast
	Tokmokplodoovosch	Chui oblast
	Ramax	Bishkek
	Agroplast	Batken oblast
	FAIR	Issyk-Kul oblast

	Koopromservis	Issyk-Kul oblast
	Gold of Issyk-Kul	Issyk-Kul oblast
Tomato juice	Osh fruit and vegetable plant	Osh oblast
	Zhashylcha	Chui oblast
	Baerkos	Jalalabad oblast
	Dessert	Chui oblast.
	Agroplast	Batken oblast
	Koopromservis	Issyk-Kul oblast
Canned vegetables, pickles, mushrooms, bean	Osh fruit and vegetable plant	Osh oblast
	EUM	Osh oblast
	Zhashylcha	Chui oblast.
	Panasenko	Chui oblast
	Pamir FEZ "Bishkek"	Bishkek
	Ailana	Chui oblast
	Rahmonberdi	Osh oblast
	Tokmokplodoovosch	Chui oblast
	Baerkos	Jalalabad oblast
	Ramax	Bishkek
	Dessert	Chui oblast
	Rich Stem	Chui oblast
	Agroplast	Batken oblast
Compote	OSKO	Bishkek
	Zhashylcha	Chui oblast
	Tokmokplodoovosch	Chui oblast
	Baerkos	Jalalabad oblast
	Dessert	Chui oblast
	Arbet & Co	Batken oblast
	Agroplast	Batken oblast
Dried fruit	Alimjanov	Osh oblast
	Osh fruit and vegetable plant	Osh oblast
	OSKO	Bishkek
	Arbet & Co	Batken oblast
	Urazbakiev	Issyk-Kul oblast
	Baimyrzaev	Jalalabad oblast
	Temir-Too	Naryn oblast.
Wine and wine materials	Yntymak	Issyk-Kul oblast
	Arbet & Co	Batken oblast
Vegetable salads and vegetable paste	Osh fruit and vegetable plant	Osh oblast
	Zhashylcha	Chui oblast
	Tokmokplodoovosch	Chui oblast
	Agroplast	Batken oblast
Vegetable juices	Tokmokplodoovosch	Chui oblast
	Temir-Too	Naryn oblast

All ten commodity groups does not produced any of surveyed enterprises. The greatest number of product groups – seven – produced only one company in Osh region. Three companies produce products of six commodity groups. One company in Chui region produces five commodity groups. Two companies manufacture products of

four commodity groups. Production of one commodity group released by nine companies.

Diagram 5. Map of production, number of enterprises



As you can see from this chart, interviewed company of Chui and Batken regions produce products of eight out of ten product categories.

In Osh produced goods of seven product categories.

In Jalal-Abad region three surveyed enterprises currently produce six product categories. Just six product categories produce companies in Bishkek.

As before, the most "special" area is the Issyk-Kul region. All of the surveyed enterprises in this region are engaged in processing of fruit and berries, and a corresponding structure of manufactured products - fruit juice, honey and wine materials group.

Any specialization of enterprises in other regions is uncertain. We only note that 6 out of 7 enterprises of Chui region and 3 out of 4 enterprises of Osh region engaged in production of canned vegetables.

Infrastructure

Concerning the problems with the enterprises infrastructure, opinions were divided. 50% of respondents indicated that they do not have any problems with electricity, water and heat supply of their enterprises.

The main problems in supply of power, water and heat resources

	Power (n=15)	Water (n=7)	Heating (n=2)
Raising prices considerably impacting financial status	33%	29%	50%
Fault of communications lines occurs often causing cut off	40%	29%	50%
Poor quality of services (low voltage, voltage fluctuations)	27%	42%	

The second half of the enterprises mentioned various infrastructural problems. Increased number of companies that reported as a problem of price increases for water and heating. We can also note the deterioration in the quality of water services (in 2008 it was considered a problem only 21% of companies).

35% and 23% of surveyed enterprises have no problems with the transportation of raw materials and finished products (respectively), because they used for this purpose its own transportation. One company is not engaged in transportation. The other companies are experiencing problems with the transportation of raw materials (63%), and finished products (75%). These figures are significantly higher than those identified in the previous review.

> *Survey data of 2008:*
>
> Most of surveyed enterprises (60%) have not experience problems with the transportation of raw materials and finished products. Only 27% of enterprises regularly have problems with transportation of finished goods and 21% of enterprises – with the transportation of raw materials.

Problems related to transportation of raw materials and finished products

Emerging problems	Upon transportation of raw materials, number of enterprises	Upon transportation of finished products, number of enterprises
High cost of transportation services	9	10
Expensive CLM	4	4
Lack of own vehicle	6	4
Shortage of vehicle with the enterprise	6	6
Depreciation of vehicle	3	2

Need for an advance payment	1	
Lack of funds	8	6
Bad roads	2	2
Customs problems	1	3
large distance between the place of production and the place of raw materials production / sales markets	6	

It should be noted that five enterprises are planning to purchase vehicles.

It is Interesting that the number of enterprises considers the problem of the cost of fuel, even decreased in comparison with the previous report. However, it significantly increased the importance of such issues as "high cost of transportation services." It is also a significant problem was the "lack of own transport."

Conclusion

In general, changes in production over the past four years, can be considered positive

- Increase of average duration of the active operation of enterprises during the year (this trend can be traced even in 2004 and was a positive factor in the previous report);
- Increase in the volume of production;
- Increase its own raw material base in horticulture, in conjunction with the intent to further modernization of production and packaging of juices;
- Continuing the gradual modernization of the equipment of enterprises and the use for this purpose primarily its own funds.

Trends in the sector are clearly long-term nature - almost all of the marked positive changes similar to those indicated in the previous report. In addition, this survey suggests the following conclusions:

- There has been a specialization in the direction of processing fruit, juice and sweet group production in the sector;
- In most enterprises, it is likely to be reduced the number of types of processed raw materials and products.

Raw materials base

Purchases of raw materials

In general, according to data provided by enterprises, the structure of demand in the most sought-after raw material has not changed over the past five years. Note that the apricot has moved from fifth place to first, and this change is most significant. On average, seven enterprises bought apricots according to the previous report, and the volume of purchases per enterprise amounted to 42 tons per year. According to a 2011 average volume of purchases of apricots has grown almost 13 times. This is consistent with data on production, which is among the leaders - fruit juices and sweet group products.

Table 5. Volume of raw materials purchases in 2011.

Raw material	Average number of enterprises	Total purchases in 2011	Average volume of purchases per enterprise per year, tonnes (3/2)
1	2	3	4
Apricots	14	7 535	538,2
Tomatoes	14	1 936	138,4
Apples	18	1 644	91,3
Cucumbers	11	1 003	91,1
Berries (strawberry, raspberries, sea buckthorn, black currant)	11	528	48,0
Grapes	4	100	25,0
Pear	6	63	10,5
beans	2	50	25,0
Mushrooms	2	40	20,0
Carrot	1	30	30,0
Squash	4	20	5,0
Plum	8	17	2,1
Pepper	6	15	2,5

Cherry	5	15	2,9
Peach	2	12	6,0
Garlic	2	10	5,0
Onion	1	10	10,0
Cabbage	1	10	10,0
pomegranate	2	10	5,0
Nuts	1	8	8,0
Corn	2	6	2,8
Egg-plant	1	5	5,0
Zucchini	2	5	2,5
Merry	1	5	5,0
Greens	3	4	1,3
Watermelon	1	1	0,6

The demand for tomatoes and cucumbers as confirmed by the range of finished products.

29 surveyed enterprises believe that the volume of supply of raw materials can be increased by an average of 70% if farmers cut sales on the wholesale market in favor of the raw materials supply to the enterprises.

Possibilities of increasing the supply of raw materials

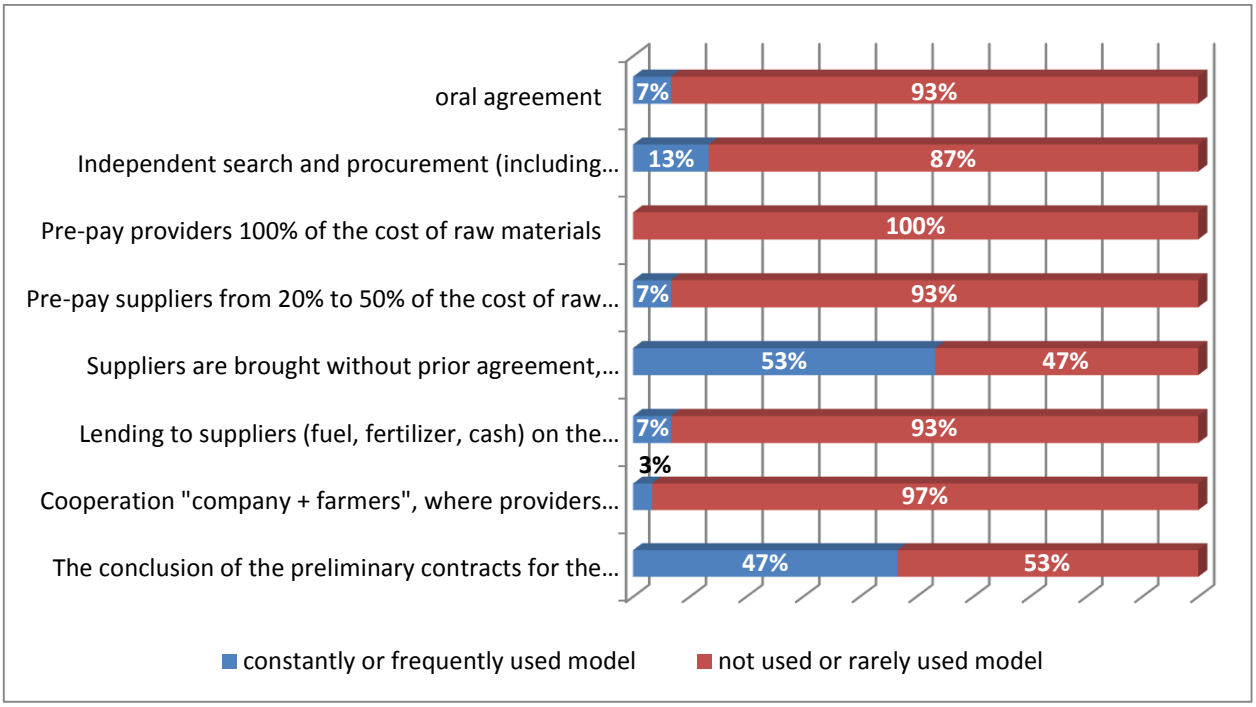
Possibility to increase raw material supply, %	Number of enterprises
by 200%	3
by 100%	5
by 80%	4
by 50%-60%	7
by 30%-45%	3
by 20%-25%	3
by 10-19%	2

4 companies have noted that the gain material according to their plan and do not need to increase supply

Assessment of the situation

47% of surveyed enterprises use one of these models specified in the chart to work with suppliers. 37% of enterprises use two models of work. 3 or 4 models of working with suppliers use 17% of the surveyed enterprises.

Diagram 6. Used models of interaction with raw material suppliers



As in 2008, the most widely used model for working with suppliers is to purchase raw materials on the fact of its delivery to the enterprise, without prior arrangement. But while the number of enterprises, constantly or frequently using this model was reduced by 12%.

The most stable model was the conclusion of preliminary binding contracts for the supply of products, with no pre-payment. Ratio of enterprises with and without this model has not changed.

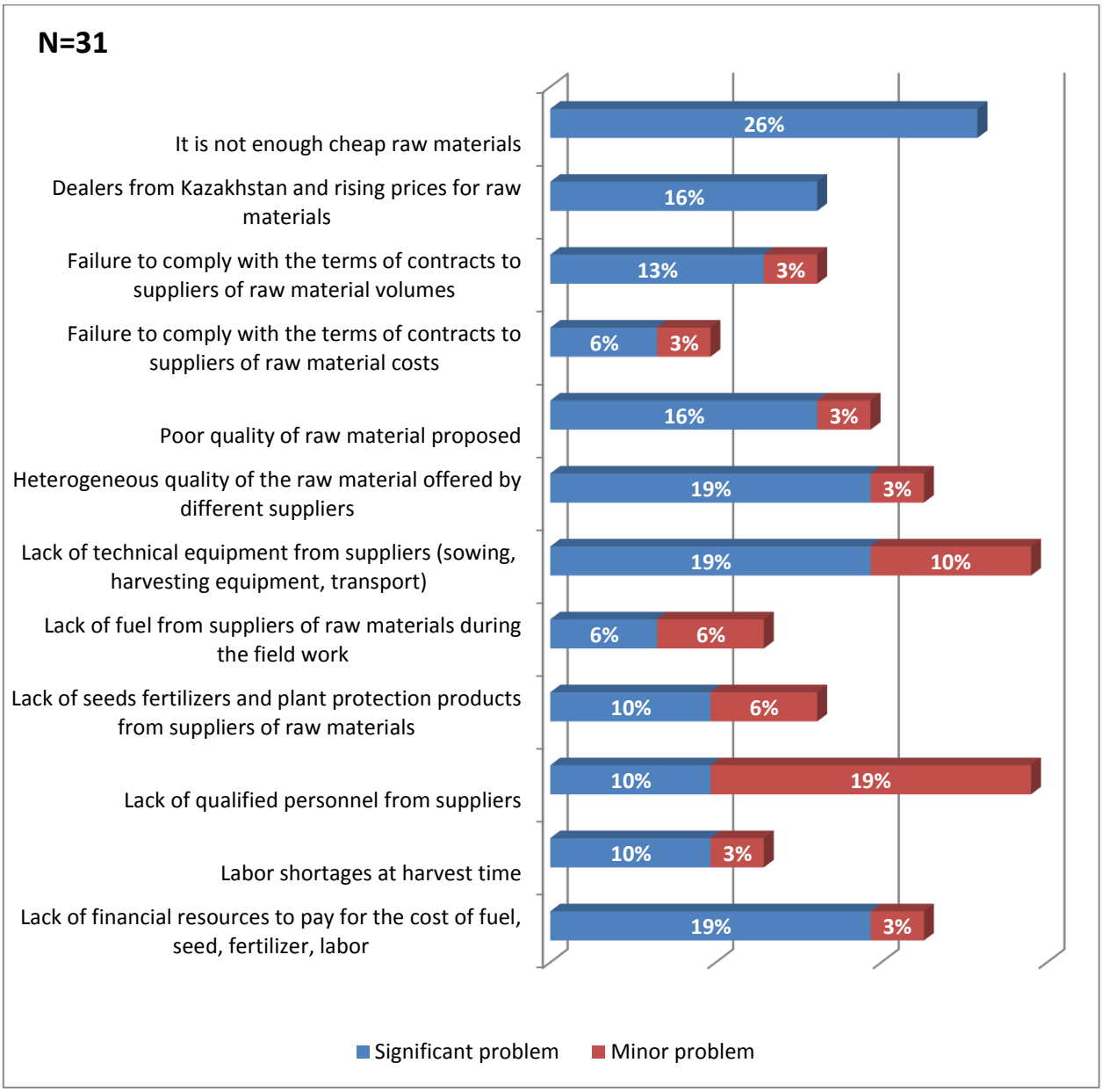
However, the survey showed that the overall situation with the usage of different models of relationships with suppliers of raw materials by enterprises has changed significantly over the past 4 years. Thus, from 37% to 3% was the reduction in the number of enterprises using the cooperation "enterprise-farmers." It is also significantly reduced the number of enterprises (from 47% to 7%), applying different types of credit suppliers. Reduced the number of enterprises using a prepayment - 20% to 50% of the cost of raw materials, only 7% of enterprises pay in advance (41% in

2008), and none of the companies surveyed do not practice 100% prepayment (7% of enterprises in 2008) .

From the combination of these changes, the reducing trust between suppliers and processors can be concluded.

Enterprises evaluation of raw material base problems has changed. In 2008, the most significant problem enterprises saw was the poor quality of raw materials - 78% of the companies at least acknowledged the existence of the problem or considers it very significant. At this time the enterprises were generally far less categorical in evaluating the problems of raw materials. 26% of enterprises consider lack of a significant problem of cheap raw materials. We can say that dissatisfaction with the requirement on volume, in terms of the opinion of most enterprises, is the most significant problem at the moment. Thus, 13% of companies noted failure of suppliers to comply with the conditions of the contract in terms of supply and 16% reported such problem, as the export of raw materials in Kazakhstan and the rise in commodity prices in the local market under the influence of this factor.

Diagram 7. Assessment of raw material supply problems by enterprises



The greatest number of enterprises considers the activities of dealers from Kazakhstan (16%) as a problem that has worsened significantly over the past five years.

Perhaps it is the lack of enterprises opportunities to solve problems with the export of raw materials to Kazakhstan and an increase in prices on the local market influenced the change of opinion about the roles in solving the problems of raw material base. If in 2008 the majority of enterprises believed that to a greater extent farmers (producers of raw materials) should solve the problem of raw materials, now the state must play the key role. Moreover, the comments of enterprises are: *"the state does not currently provide any kind of help in any taxation or in solving problems with the export of raw materials abroad."*

It is interesting that this time their role in solving the problems of raw material base the company estimated even higher than that of farmers.

Table 6. Opinions of the enterprises on the distribution of the roles in solving the problems with raw material base

The key role in addressing raw material base problems should play...	In the first turn	In the second turn	In the third turn
State	8	6	3
Everybody should play their respective roles and make adeguate contribution to address the problem	6	5	1
Processing enterprises	5	1	3
Agricultural producers themselves	3	1	2
Projects of the international organizations	2	4	1

Number of enterprises willing to do anything to solve the problems with raw material base was decreased markedly in comparison with 2008. Part of this reduction can be considered positive, as 11 companies (35%) in the survey indicated that do not have any problems with raw materials. Nevertheless, reducing the number of enterprises willing to provide various types of support to farmers from 30 to 9 is still significant.

It is interesting, that in 2008 it was 11 enterprises who as a solution in solving the problems with raw material base intended to create its own raw material base. And if the number of companies willing to provide support to farmers was reduced by 70%, then aimed at their own raw material base was only half full.

Table 7. Readiness of enterprises to solve the problems of raw material base

Note

Answers offered by the enterprises themselves are written in italics

Types of activeties of enterprises to address raw material base problem	Number of enterprises
Support for farmers (various species) – to provide an advance, CLM, fertilizers, machinery, land, credit, information and advice)	9
Changing the terms of contracts (including financial – advance payment, the purchase price)	5
Self-cultivation of raw materials / raw material base of their own	5
Transportation of products	*9*

To increase and expand the capacity of the enterprise	*4*
The company is not ready to do anything to solve the problems of raw materials	*3*
To work through VC	*1*

Table 8. Assistance required for the enterprises in solving problems of raw material base

Answers of enterprises on the open question. Total received 15 answers. Most of the answers are grouped. The answers that were not included in the group are shown in italics.

Financial and technical-material, including	27
financial support	15
materials (cover for cans, containers, seeds, CLM)	6
Equipment and vehicles	3
Consultative and information	7
Adjustment of cooperation (with the farmers, with companies, with AFVE)	4
Creating a cooperative, nursery gardens	*3*
Needed specialists - agronomists	*2*
need lobbying	*1*
At the state level to improve the control on the export of raw materials	*1*

Three enterprises responded that they don't need any help.

Presumably, answering this question, some enterprises considered the totality of their problems (not just the problems with the raw material). Characteristically, in contrast to the number of enterprises that are ready to make efforts in solving the problems of raw materials, the number of enterprises who need support, almost unchanged.

Conclusion

The situation with the raw material base has changed markedly over the past four years. The first is the lack of problems with providing raw materials for one third of the surveyed enterprises. Most likely, the majority of other enterprises severity of the problem also declined. Even changes, according to the survey, in the relationship models used (decrease in prepayments, cooperatives and crediting of farmers) can be interpreted as increased confidence in the ability of enterprises to provide themselves with raw materials. On the other hand it may be a consequence of the failure of enterprises to invest resources and efforts in the supply of raw materials market in Kazakhstan.

The problem with the amount of raw materials at affordable prices brought to the forefront by enterprises in the north of the country. There is no doubt that the needs of buyers and consumers of raw materials from Kazakhstan at present exceeds the capacity of farmers in Chui and Issyk-Kul regions. The survey showed that in solving problems with the export of raw materials abroad enterprises rely only on the state (though not really hoping for it). The enterprises do not have leverage for direct exposure on this problem. But there is a way that allows it to circumvent - the formation of its own, fully controlled by the raw material base. An example of one third of enterprises that reported no problems with raw materials, can be contagious.

Enterprise management

Activities in management

The owners of the business carried out the operational management on 15 surveyed enterprises. Accordingly, more than half of companies surveyed at least formally headed by salaried managers.

On most of surveyed enterprises first head of the company is responsible for all key business functions. The only exceptions are the functions of production, technology and quality control - the majority of surveyed enterprises for their implementation the chief technologist is responsible. In this case, the situation has not changed in comparison with the previous study. We only mention the increasing number of enterprises, where the functions of marketing and sales professionals are responsible (some salaried executives). In other cases the situation is, in our view, while consistent with existing scope of business of most enterprises. For small businesses the implementation of the personnel management functions by the manager (for example) is more justified than hiring a separate specialist and provide him/her significant power.

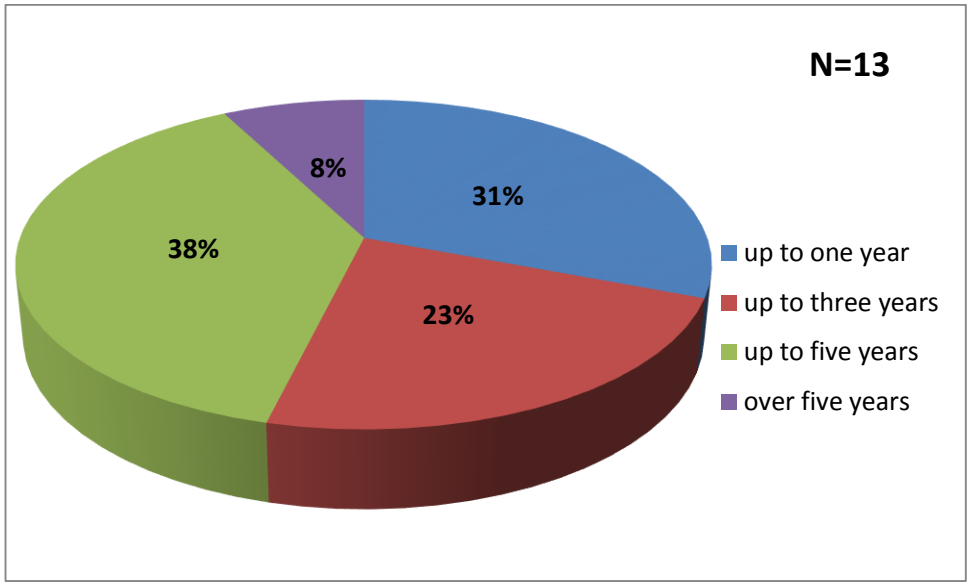
Table 9. Distribution of responsibility for the key management functions

Individuals responsible for function perfomance	Number of enterprises
The function of marketing management	
Top manager	17
Manager of sales and commerce (separate position)	9
Deputy of top manager	3
Manager of marketing (separate position)	**2**
Nobody is responsible	1
The functions of distribution and sales	

Top manager	12
Manager of sales and commerce (separate position)	8
Distributors and Agents	7
Deputy of top manager	3
Manager of marketing (separate position)	1
Warehouse Manager	1
Functions of Financial Management	
Top manager	17
Chief accountant	10
Financial manager (separate position)	**3**
Commercial Director	1
Financial Analyst	1
The functions of production and technology	
Chief Technologist	**18**
Manager for the production (separate position)	5
Top manager	4
Shop superintendent	4
Head of the Laboratory	2
Engineer	1
The function of quality control	
Chief Technologist	11
Head of the Laboratory	6
Top manager	4
Manager for the production (separate position)	3
Laboratory assistant	3
Shop superintendent	2
Sanitary and epidemiological station, Gosstandart	1
Commercial Director	1
Nobody is responsible	1
Human Resource Management	
Top manager	23
Personnel department	5
Production manager (separate position)	3
Human Resources manager (separate position)	**1**

42% of enterprises are creating development plan in the form of the document. Four enterprises make strategic plan for the Local Development Program of USAID.

Diagram 8. Horizons of the development plans of enterprises



One of the enterprises that do not have development plan started to develop it at the time of the survey.

Enterprises identified the following causes for which they do not constitute development plans and do not use them in their activities.

The reasons for the lack of an enterprise development plan	Number of enterprises
There is no time and human resources for plan development	9
The whole plan is formed in the mind of the first head, and we do not consider that it is necessary to transfer it to paper	4
We do not see any benefit in developing such a plan, because the situation in our business can not be planed	4
We develop plans periodically, but we don't have them on paper always, because v deviations from the plan often happend	1

The situation with the making of development plans by enterprises has not changed much over the past 4 years. But in 2008 the main reasons for which the company refused to development planning was the lack of experience in such work, as well as the fact that the company had not seen this good. However, the most common cause of this time ("lack of time and resources") – is actually more lenient view of the lack of good planning.

Table 10. . Objectives of enterprises

Note

There were received 16 answers. Most of the answers are grouped. The responses were not included in the group are shown in italics

Objectives of the enterprises	Number of enterprises
Production of new products	19
Upgrading, re-production	15
Increase of production	13
Solving problems of sales	12
Improving product quality, obtain HASP certificate	4
Increased efficiency, staff development	3
a new label, packaging design	*3*
planting of fruit trees	*2*
making profit	*2*
entity decides to remain in this sector or not	*1*
company plans to open up and start to work	*1*
repayment of debt	*1*
To create web-site	*1*

63% of surveyed enterprises set themselves one or two goals. Three goals – 25% of surveyed enterprises. 10% of enterprises has four or five goals.

There are noticeable differences between the goals announced by companies and the major problems in management. Thus, 46% of companies have voiced problems in the field of personnel management, although only 9% of companies have goals, overlapping with those problems. This situation is almost completely repeats existed at the time of the previous survey.

Таблица 11. Problems in the management of enterprises

Note

Answers offered by the enterprises themselves are written in italics.

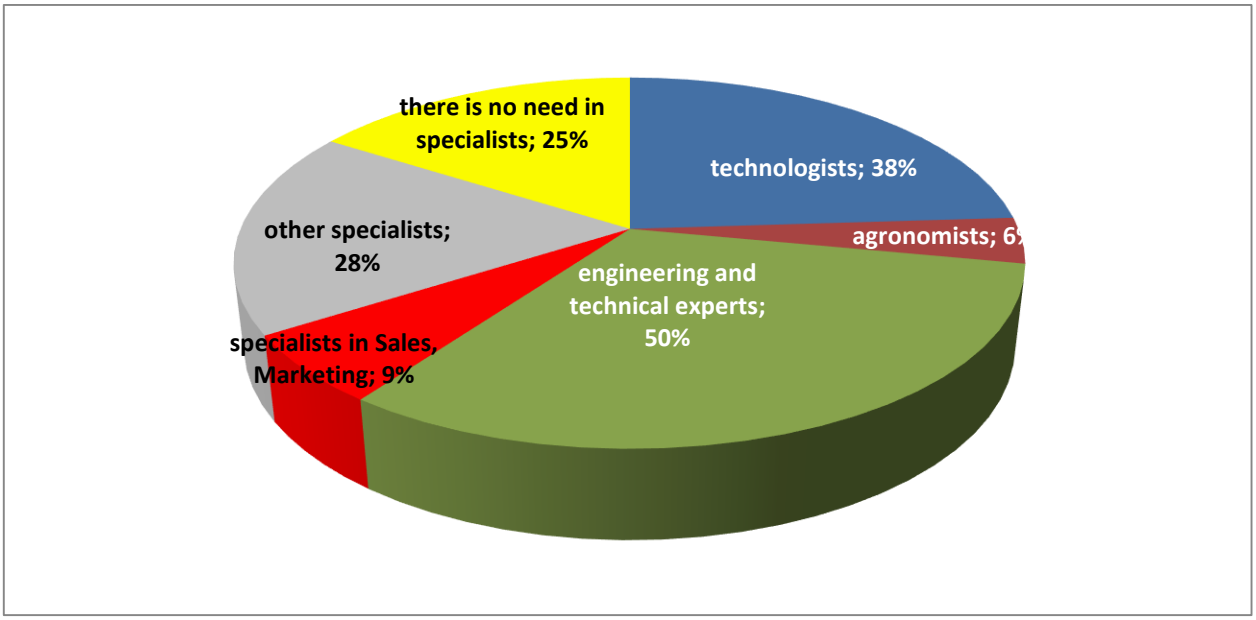
Problems in enterprise management	Number of enterprises
problems in personnel management, including	13
lack of qualified personnel	5

there is no harmony with the seasonal workers	1
staff turnover	3
weak interest of staff	4
shortage of working capital	3
replacement of equipment, technical equipment	*1*
sales market is far	*1*
no Internet	*1*
problem in the distribution of funds	*1*

Human Resource Management

In comparison with 2008 has decreased the need for enterprises in key professionals on the workplace. Only 38% of companies feel the need for technologists (four years ago this need was 72% of companies surveyed). The demand for engineering personnel, as before, is essential, but in 2008 it was higher (66% of companies surveyed).

Diagram 9. Needs assessment of key professionals



In addition, the tone of enterprises comments regarding personnel issues has not changed. Companies say that they have no ability to pay a decent salary for qualified specialists, that those *"few available"* in the country and people do not want to work in regions for proposed payment.

Topics of training needed for the managers of the enterprises

21 enterprises gave the answers to this question.

Directions managers trainings	Number of enterprises
New technologies in the production	11
Marketing and Sales	8
Quality, product safety, HASSP	5
Automation of accounting	2
equipment operation	2
Human Resource Management	1

Statistics on staff

The number of permanent staff employed at the surveyed companies is 764 persons (an average of 24 people in one company).

The number of full-time employees at enterprises

Number of full-time employees	Number of enterprises
from 50 to 100	4
from 25 to 40	7
from 24 to 20	13
Less then 10 pers.	8

In the season of processing 91% of surveyed enterprises attract an additional 970 persons, i.e. number of employees increased by 127%. Number of employees on an average was increased on 10 persons per one enterprise.

The number of additionally involved seasonal workers

Number of seasonal workers	Number of enterprises
from 80 to 100	3
from 50 to 70	5
from 21 to 49	6
from 10 to 20	10
Less then 10	4

Categories of workers, in which there was an increase in the number

Position	На каком количестве

	предприятий
general workers	19
sorters	3
technologist	3
temporary workers	2
palletizer	2
loaders	2
cashier	1
working on equipment	1
packers	1
mechanic	1
electrician	1
varschiki	1
line operators	1
washers	1
cleaners	1
collection of raw materials	1
engineer	1

95% of surveyed enterprises named a number of managerial staff. The total number of AMS in these companies is 157 people (an average of 5 persons in the enterprise, as in 2008). The share of total AMS permanent workers declined compared with 2008 and amounted to 22% (vs. 30%).

The proportion of women workers in the surveyed companies averaged 59%. At the same time in managerial positions, women on average 51%.

Women working at the enterprises

Share of women among the workers of the enterprises	**Number of enterprises**
from 90 to 100%	4
from 61% to 80%	8

from 51% to 60%	3
from 41% to 50%	5
from 31% to 40%	4
from 10% to 30%	3

Women in managerial positions

Share of women among employees of managerial positions	Number of enterprises
from 90% to 100%	3
from 61% to 80%	8
from 51% to 60%	1
from 41% to 50%	4
from 31% to 40%	1
ofrom 10% to 30%	4
0%	3

The average age of employees at the enterprises

	average age	maximum age	minimum age
Among employees	34 years	55 years (one enterprise)	20 years (two enterprises)
Among AMS	40 years	55 years (two enterprises)	30 years (four enterprises)

Conclusion

The most notable change in human recourse management in comparison with the previous report, is the reduction of the number of owners involved in operational management of enterprises (from 81% in 2008 to 52% in 2012). In general, this positive trend, if hired managers demonstrate greater professionalism.

Performance management is the foundation for positive changes in production and sales of products. And since according to the survey, these changes are really positive in general, it is possible to draw conclusions about the increased ability of enterprises to adopt and implement the right decisions. The more that the review covers the difficult years for the business: the crisis in the major markets, political instability inside the country. We can say that the company went through this period with dignity. Note that half of the enterprises in the survey stated that they have no problems in the management, whereas in 2008 these enterprises were only 19%.

Marketing

Trade marks, sold products, assortment

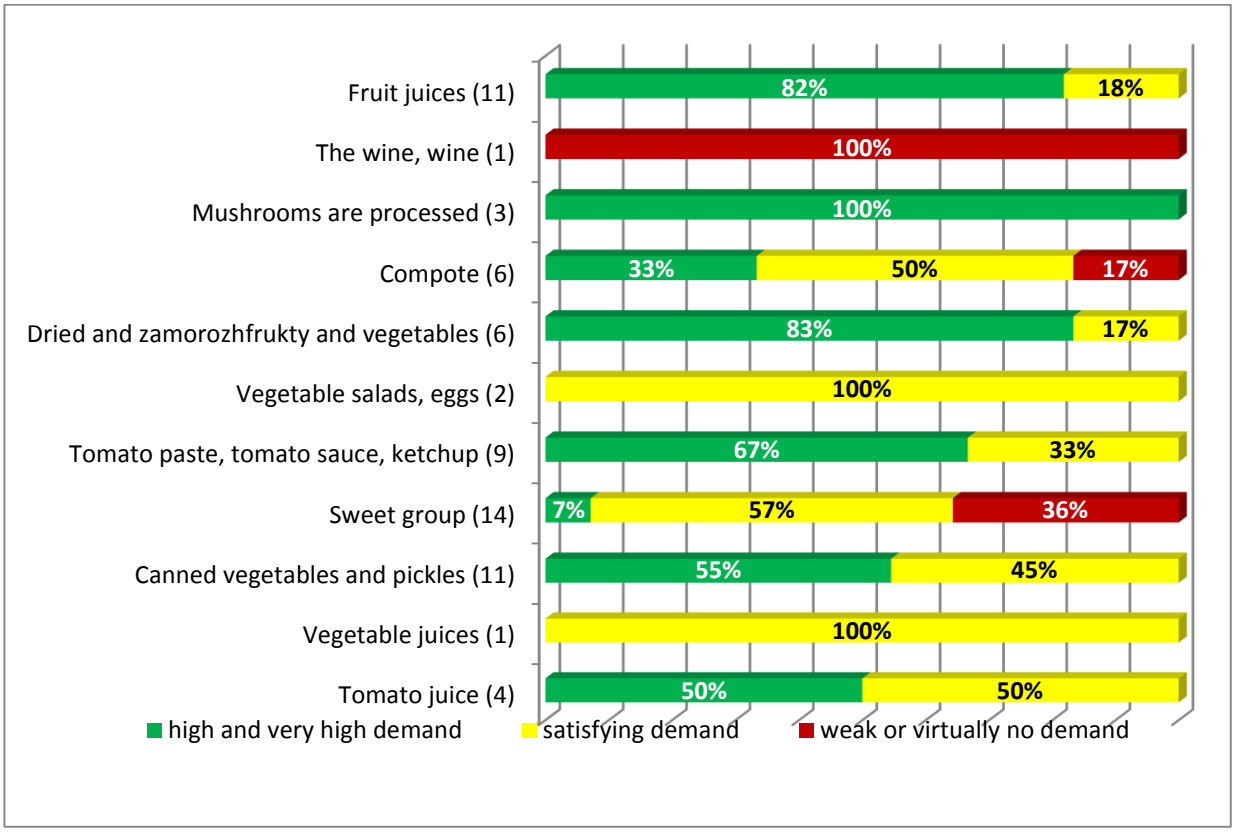
Most of surveyed companies manufacture products under their own brands. Six enterprises use for their products two brands, one company manufactures products under three brand names.

Under the brand name "Taste of the Sun" produced products only four enterprises (8 in 2008). Another company plans to release products under this brand in 2012. Share of TM "Taste of the Sun" in the volume of production of enterprises that use this brand is 30% to 85% (in 2008 the company had 100% of the products sold under this TM). All companies that produce products under the brand "Taste of the Sun" also use other brands (in 2008 – only one used in the production other TM, except "Taste of the Sun").

Diagram 10. Evaluation of demand for the products given by enterprises

Note

The number of companies evaluating the product is given in brackets next to the product



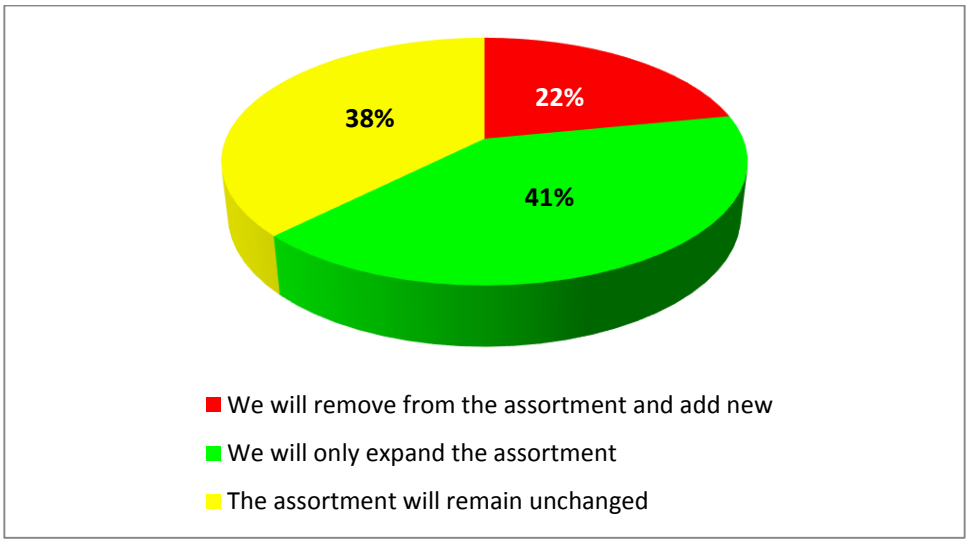
The most unambiguous assessment is made of high demand for processed mushrooms. But this type of product during the time of the survey was produced only by two companies (another company which put a high estimate of this type of product

is likely among the enterprises planning to release this product). More revealing are the estimates of demand for the products present in the range of more enterprises. As well as four years ago for such products canned vegetables and pickles are related. However, in the previous report 100% of the companies that gave an assessment of demand for this product, noted that it is "high" or "very high". At this time, almost half of enterprises believe the demand for canned vegetables and pickles only "satisfactory." But more positively than in the previous report, the company estimated the demand for fruit juices. In 2008 47% of enterprises believed the demand for this type of product, "satisfactory" and 7% rated it as "weak."

More than a third (5) out of14 enterprises who gave an assessment of demand for products of sweet group, consider it a "weak". As in the 2008 estimates were not fully affect the plans on changing the assortment. As shown below, only two companies plan to remove this type of product from the range. Assessment of the demand on the products of sweet group has undergone significant changes – the proportion of businesses who believe the demand for this type of product "high" or "very high" fell from 40% to 7%.

In general, estimates of demand for various types of products in 2012, significantly more positive than in 2008. In a previous report, 23 companies evaluated the demand for a particular type of product as a "weak" or "virtually absent". Such estimates, though in varying degrees, have been assigned to 10 of 13 products. At this time, only 7 enterprises have put such an estimate three types of products out of 11 evaluated.

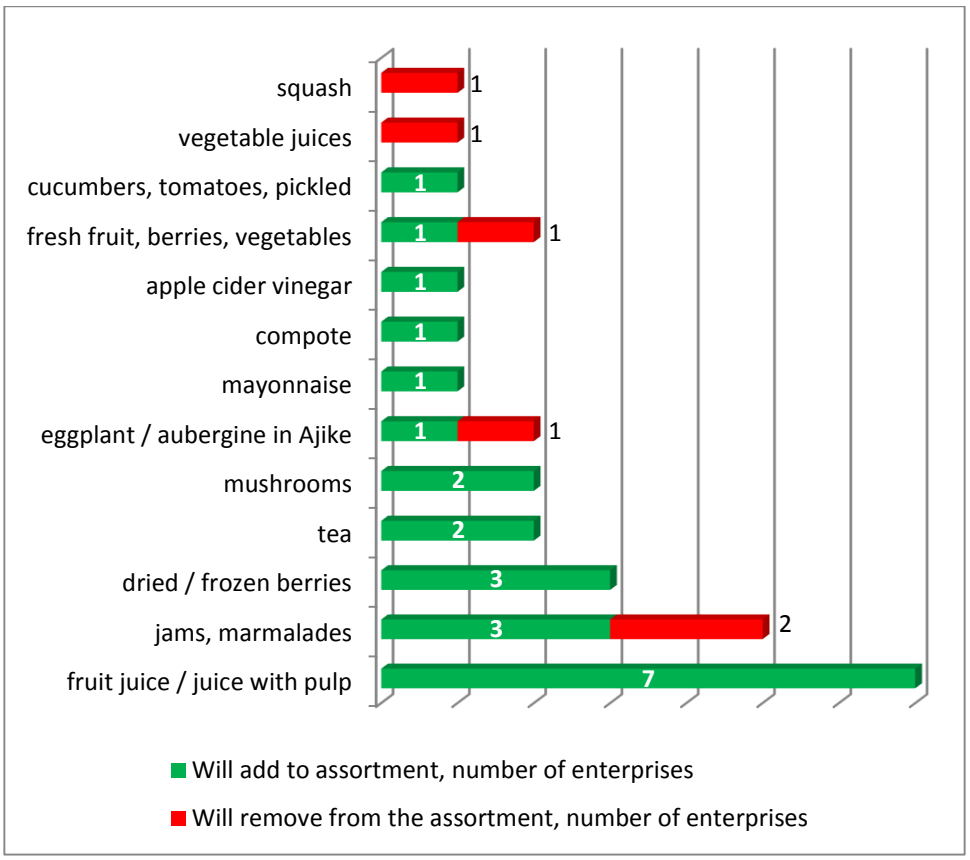
Diagram 11. Plans of enterprises in terms of changing assortment



n total, enterprises intend to add to the assortment 13 types of products. Most of these types of products already on the market and it is through these types of products planned to expand the assortment of many of enterprises. Thus, 22% of

companies surveyed plan to add into assortment fruit juices (two times less than in 2008).

Diagram 12. Planned changes in assortment broken down by types of products

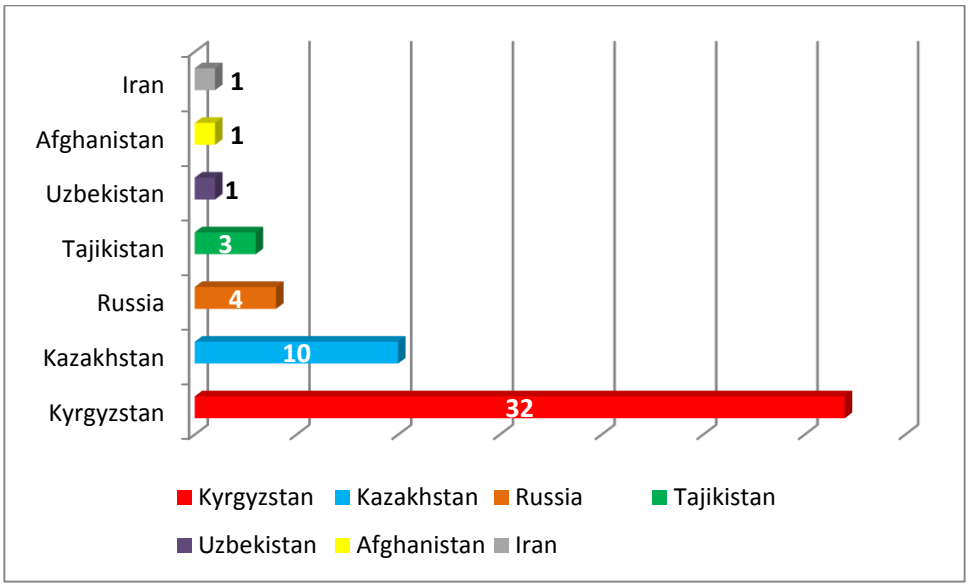


Sales markets

All of the surveyed enterprises sell their products in Kyrgyzstan. Thus, in contrast to the 2008 data among surveyed enterprises there is no enterprise that sell 100% of products to foreign markets (in 2008 there was 19% of such companies among surveyed).

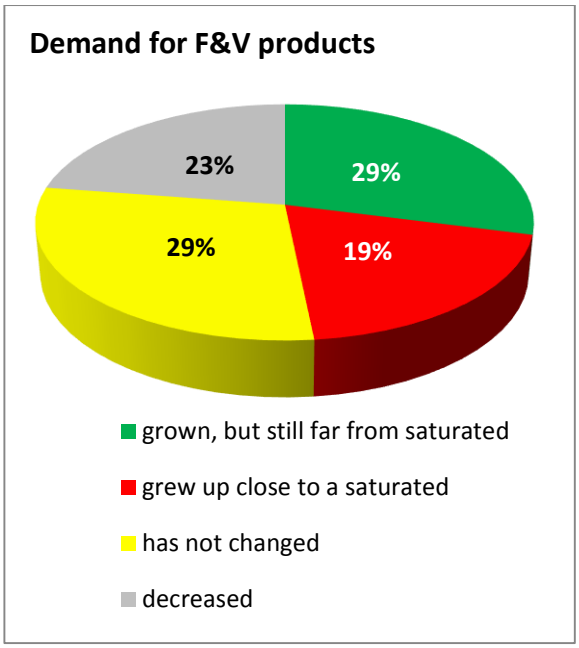
The most untapped market for surveyed enterprises among foreign is Kazakhstan market – more than 30% of enterprises in 2011 sell products on this market.

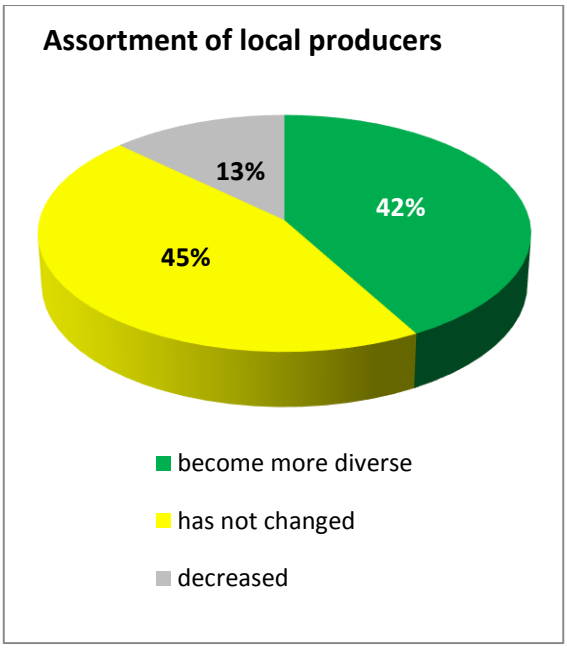
Diagram 13. Geographic sales markets in 2011, number of enterprises

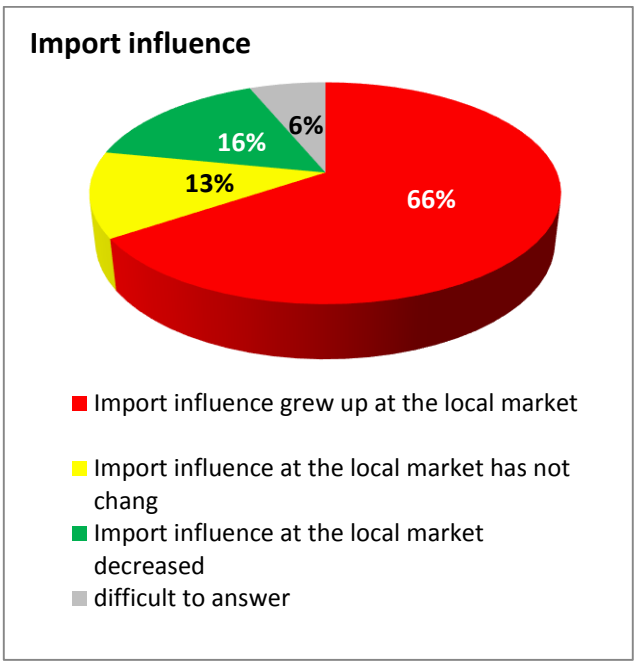


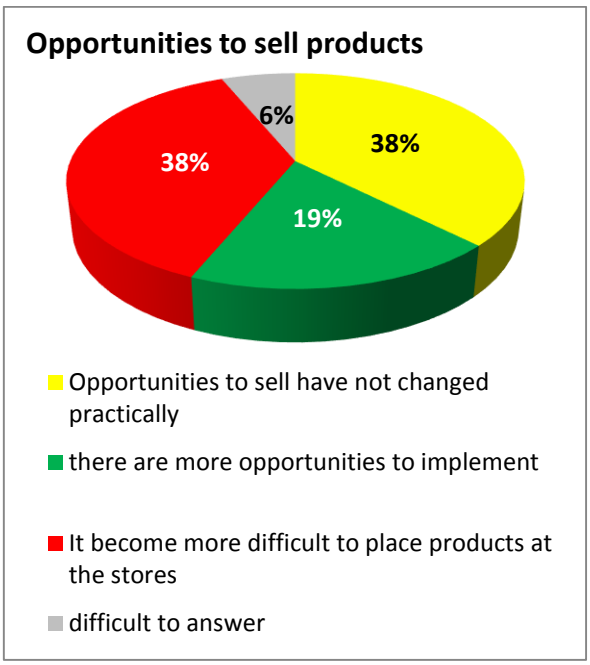
29% of surveyed enterprises consider that domestic demand is still far from saturation. In 2008 58% of surveyed enterprises thought so.

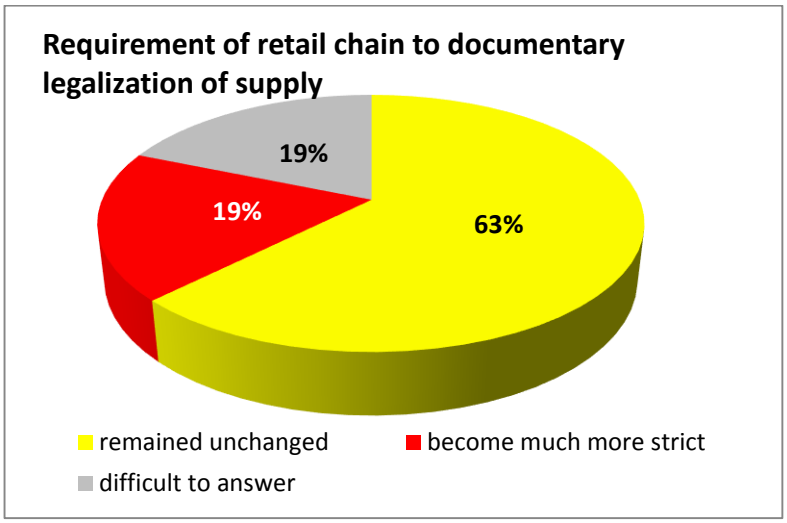
Diagram 14. Evaluation of changes at domestic market given by enterprises for the period 2008-2011.











In Kyrgyzstan, the most attractive domestic market is Bishkek, 42% of surveyed enterprises in past five years, an average of 75% of its products sold in the capital. 29% of surveyed companies sell their products throughout Kyrgyzstan.

In Almaty, its products sold at an average 16% of surveyed enterprises. 10% (three companies) indicated that they were selling their products throughout Kazakhstan, and in particular to Astana. 1 – 2 enterprises sold its products in other regions of Kazakhstan.

In the Russian Federation regions in which Kyrgyzstan company supplied its products, all of the past five years, are Moscow, St. Petersburg, Novosibirsk, Far East and Ural region.

Table 12. Geographical sales markets of surveyed enterprises broken down by region, 2011

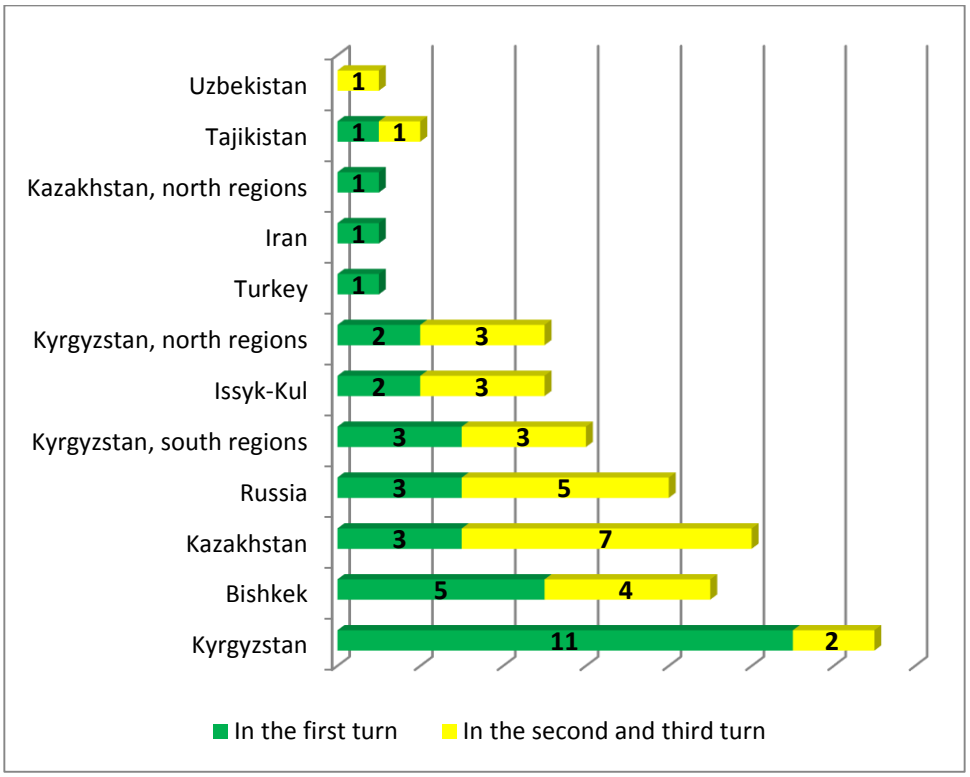
Sales markets	Number	Share[4]
Bishkek	13	75%
Entire Kyrgyzstan	9	83%
Kyrgyzstan north regions	4	50%
Kyrgyzstan south regions	4	48%
Issyk-Kul	2	75%
Naryn	1	100%
Kazakhstan – Almaty	4	34%
Kazakhstan (Almaty, Astana, Karaganda)	1	30%
Astana	2	14%
Entire Kazakhstan	2	35%
Kazakhstan south regions	1	3%
Moscow	1	30%
Russia (St. Petersburg, Moscow, Novosibirsk)	1	50%
Far East	1	8%
Ural	1	80%
Entire Tajikistan	3	42%
Uzbekistan	1	20%
Afghanistan	1	10%
Iran	1	70%

74% of surveyed companies consider as a priority sales market – the market of Kyrgyzstan, or its individual regions (according to previous report, this position was two-thirds of companies).

Kazakhstan is a priority sales market for 13% of enterprises; in total 84% of surveyed enterprises are planning to supply products to the market of northern neighbor.

[4] Sales share of enterprises selling at given market from their total sales. For example 13 enterprises sold its products in Bishkek. Average share of these enterprises in Bishkek made up 75%.

Diagram 15. Priority sales markets, number of enterprises

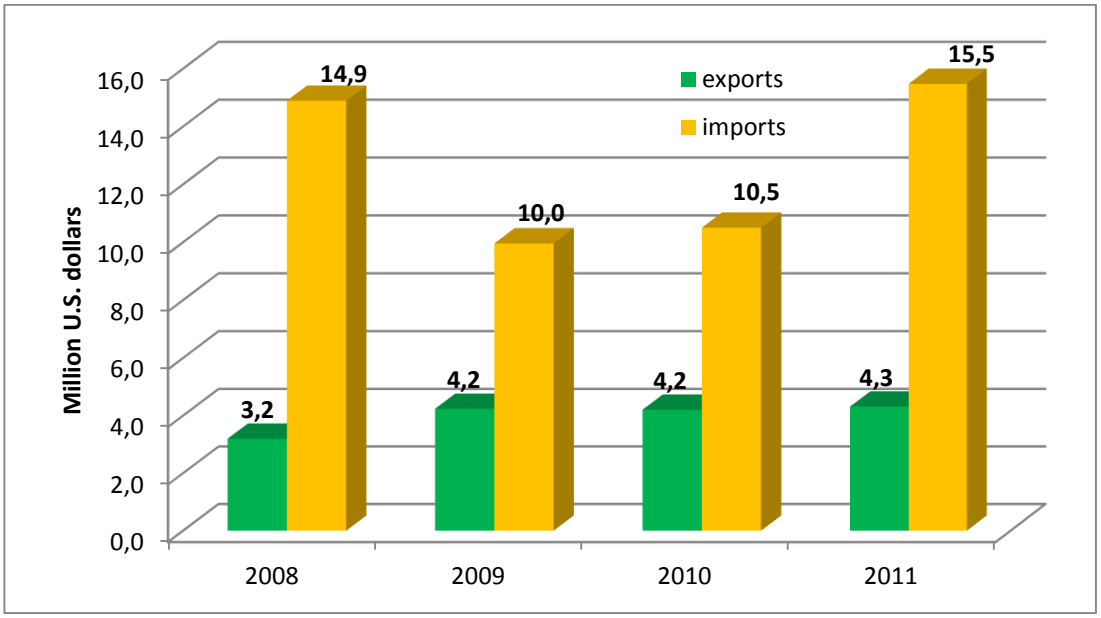


Foreign trade operations[5]

The volume of foreign trade operations of KR with the processed vegetables, fruits, spices and other products for the period from 2008 to 2011 amounted to 66.8 million U.S. dollars. This is 2.2 times higher than for the period from 2003 to 2007. In 2003–2007 import was faster pace, and its excess over export amounted to 15.7 million U.S. dollars. In the period from 2008 to 2011 exports grew more rapidly and, as a result, the excess of import over export fell to 8.7 million U.S. dollars.

Diagram 16. Volume of foreign trade operations

[5] According to the data of the National Statistical Committee of the Kyrgyz Republic



Export

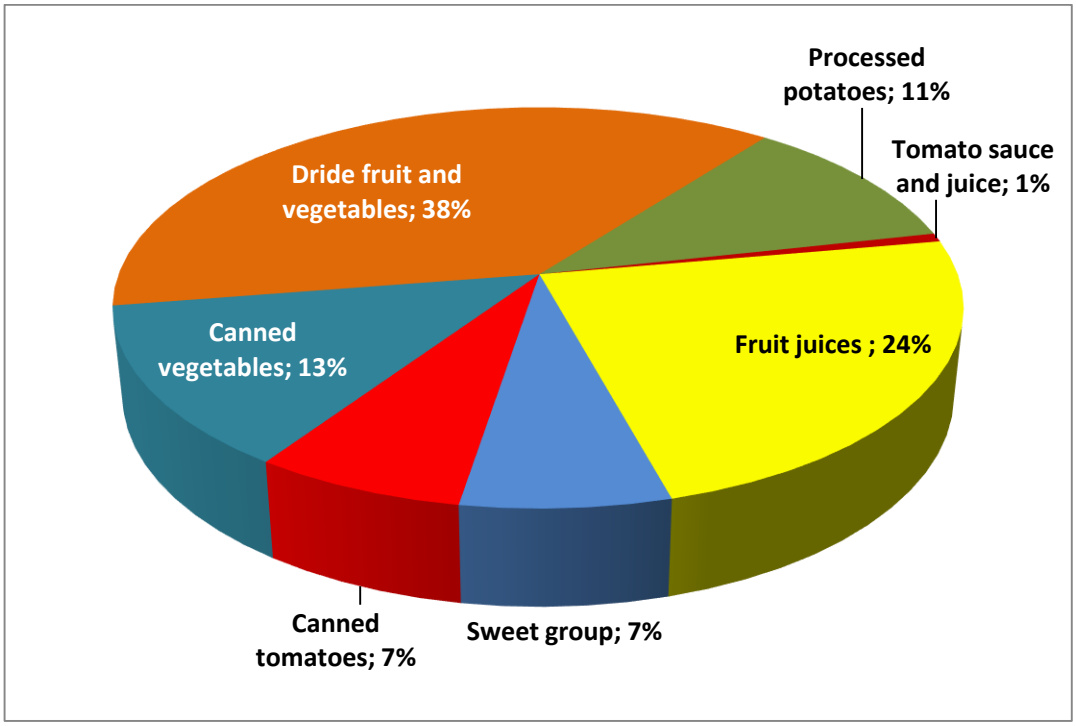
In the period from 2008 to 2011 export of the products under discussion amounted to 15.9 million U.S. dollars. That's 8.5 million U.S. dollars more than five years from 2003 to 2007. The average annual volume of export increased by 2.6 times, from 1.5 million U.S. dollars to 4 million U.S. dollars.

Export growth was caused by changes in its structure and growth in the supply of dried vegetables and fruits. The share of this position in the volume of export increased from 1% in the period from 2003 to 2007 to 38% in the period from 2008 to 2011. In value terms, export rose to this position 82 times and gave a total of 70% growth in comparison with the previous period.

In the period 2003–2007 85% of export accounted for two positions – fruit juices and processed tomatoes. During period 2008–2011, this share of export was on four positions: except dried vegetables and fruit – fruit juices, canned vegetables and processed potatoes.

In terms of money, export of canned tomatoes has decreased by 900 thousand U.S. dollars for the entire period, while the share of these products in total export fell up to 7% from 27% in 2003–2007.

Diagram 17. Structure of export broken down by product types, 2008-2011.



In previous report it was concluded on the growth of product specialization, as well as earlier there was a lower concentration of export of commodity items. In the period under review the situation again changed, but we can not say that the diversification of export will become a trend for the next four-five-year period.

The apparent positive factor is also an increase in annual export. Thus, despite the decline in the proportion of fruit juices in total export, the average supply of this product increased by about 130 thousand U.S. dollars. The growth trend of average annual export volume is preserved since 2003.

Export of **dried fruits and vegetables** as a whole grew over the last four years, the maximum amount occurred in 2010. The average annual export of this commodity group was 1.5 million U.S. dollars.

Table 13. Export of dried fruits and vegetables

Country	2008		2009		2010		2011	
	Thousand USD	share, %	Thousand USD	share, %	Thousand USD	share, %	Thousand USD	share, %
Russia	265	35%	472	32%	1 292	59%	1 044	66%
China	191	25%	219	15%	418	19%	127	8%
Turkey	112	15%	261	17%	119	5%	215	13%
Kazakhstan	13	2%	31	2%	202	9%	182	11%
Other countries	172	23%	512	34%	172	8%	23	1%
100% export of product	**753**	**100%**	**1 495**	**100%**	**2 204**	**100%**	**1 591**	**100%**

Dried fruits and vegetables have the highest export geography of all the species of products. Thus, in 2010 product has been exported to 15 countries. The biggest importers of dried fruits and vegetables from Kyrgyzstan are Russia and China (a total of 67% of export items during the period). China imports mainly dried grapes and apricots, Russia "other dried fruit."

Kazakhstan remains the largest importer of **fruit juice**. The average annual export volume of juice in Kazakhstan fell very slightly (by 1.4% compared with the period of 2003-2007.), But Kazakhstan's share declined from 58% to 53% in the period under review, due to increase in the supply of juice to other countries, especially to China and Uzbekistan.

Table 14. Export of fruit juice

Country	2008		2009		2010		2011	
	Thousand USD	share, %	Thousand USD	share, %	Thousand USD	share, %	Thousand USD	share, %
Kazakhstan	553	34%	684	76%	373	63%	363	58%
China	578	35%	0	0%	1	0%	1	0%
Uzbekistan	214	13%	140	16%	133	22%	1	0%
Russia	27	2%	26	3%	69	12%	213	34%
Other countries	262	16%	48	5%	19	3%	49	8%

100% export of product	**1 633**	**100%**	**898**	**100%**	**595**	**100%**	**627**	**100%**

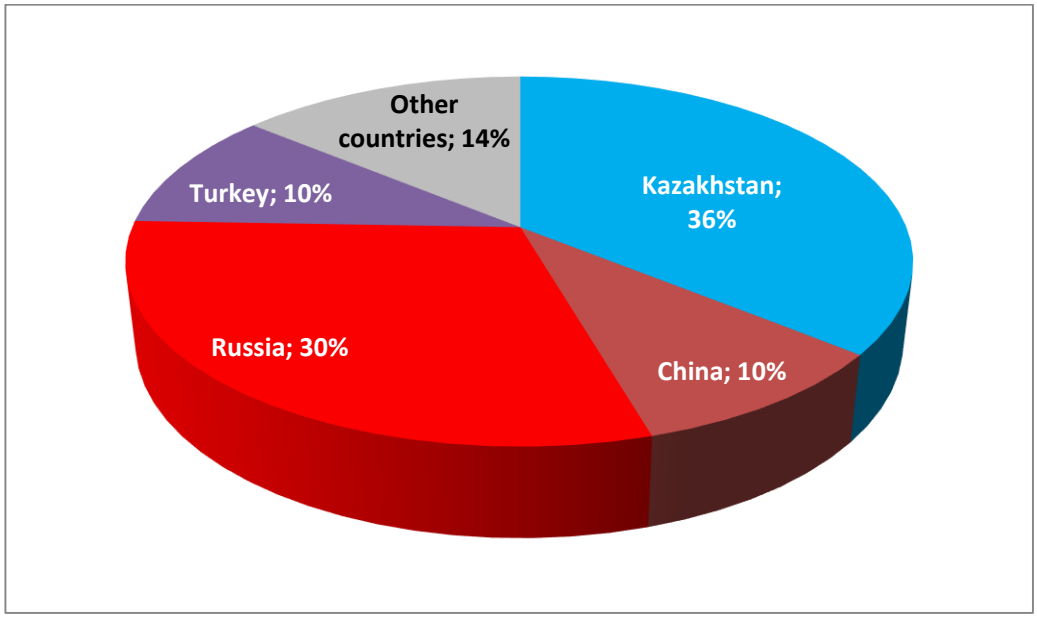
During the reporting period there was a trend of growth in export of canned vegetables. It is interesting that there is gradual increase in the number of importing countries. While in 2008 this products shipped only to Kazakhstan and Russia, in 2011, canned vegetables from Kyrgyzstan imported six countries. Another noteworthy point is that the largest importer of this product for the entire period from 2008 to 2011 (39%) was Turkey, due to supply only in 2011 (position of "other vegetables and mixtures for for short term storage").

table 15. Export of canned vegetables

	2008 г.		2009 г.		2010 г.		2011 г.	
Country	**Thousand USD**	**share, %**	**Thousand USD**	**share, %**	**Thousand USD**	**share, %**	**Thousand USD**	**share, %**
Turkey							820	59%
Kazakhstan	99	67%	227	61%	60	37%	151	11%
Russia	49	33%	134	36%	97	60%	69	5%
Other counties			11	3%	6	3%	358	26%
100% export of product	**149**	**100%**	**372**	**100%**	**162**	**100%**	**1 399**	**100%**

In general, there were occurred some changes in the structure of export by country. Kazakhstan's share fell from 64% due to increase in proportion of China, Russia and Turkey. Kazakhstan and Russia are permanent and long-term trading partners of Kyrgyzstan on these types of products. Both China and Turkey are also constantly present among buyers of Kyrgyzstan products, but it is difficult to say whether their share steadily growing, or at least remain at current level.

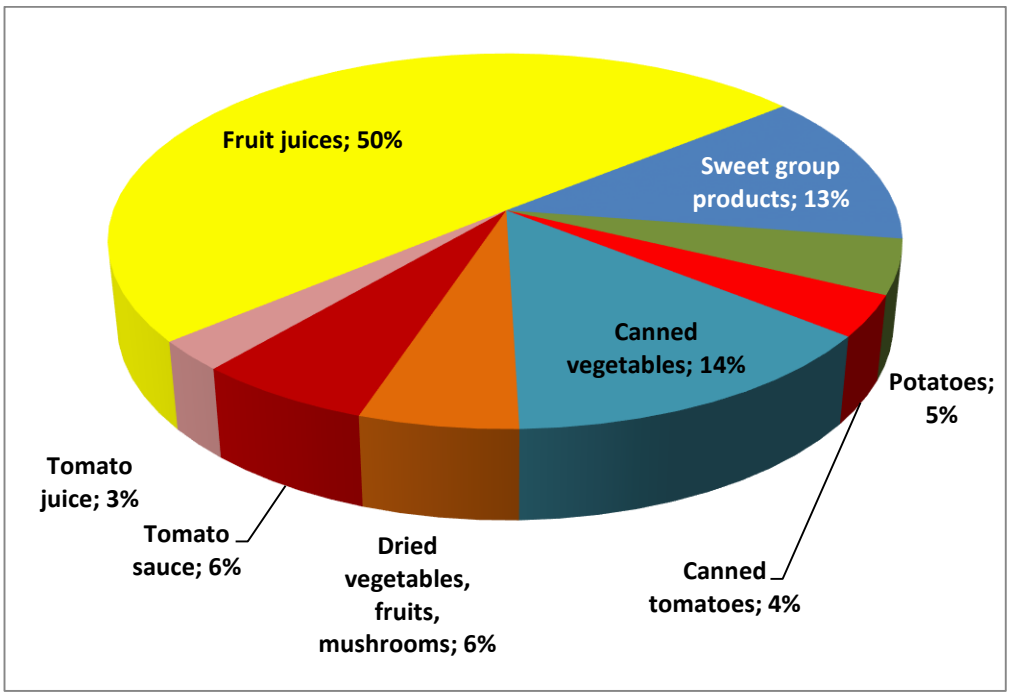
Diagram 18. The structure of export broken down by countries, 2008-2011,



Import

Import of the products for the period 2008-2011 was amounted to 50.8 million U.S. dollars (an average of 12.7 million U.S. dollars per year, which is 2.8 times higher than in the period 2003-2007.). And even with a decrease in import in 2009-2010 its volumes still remained greater than the highest rate in the period 2003-2007.

Diagram 19. Structure of import broken down by product types, 2008-2011.



The decline in import volume in 2009 was due to reduction of supplies to Kyrgyzstan of fruit juices, which have grown continuously since 2003. In spite of that fruit juices are still the most significant position in the structure of import. In annual average terms, import mainly of fruit juices provided the total increase in imports over the period.

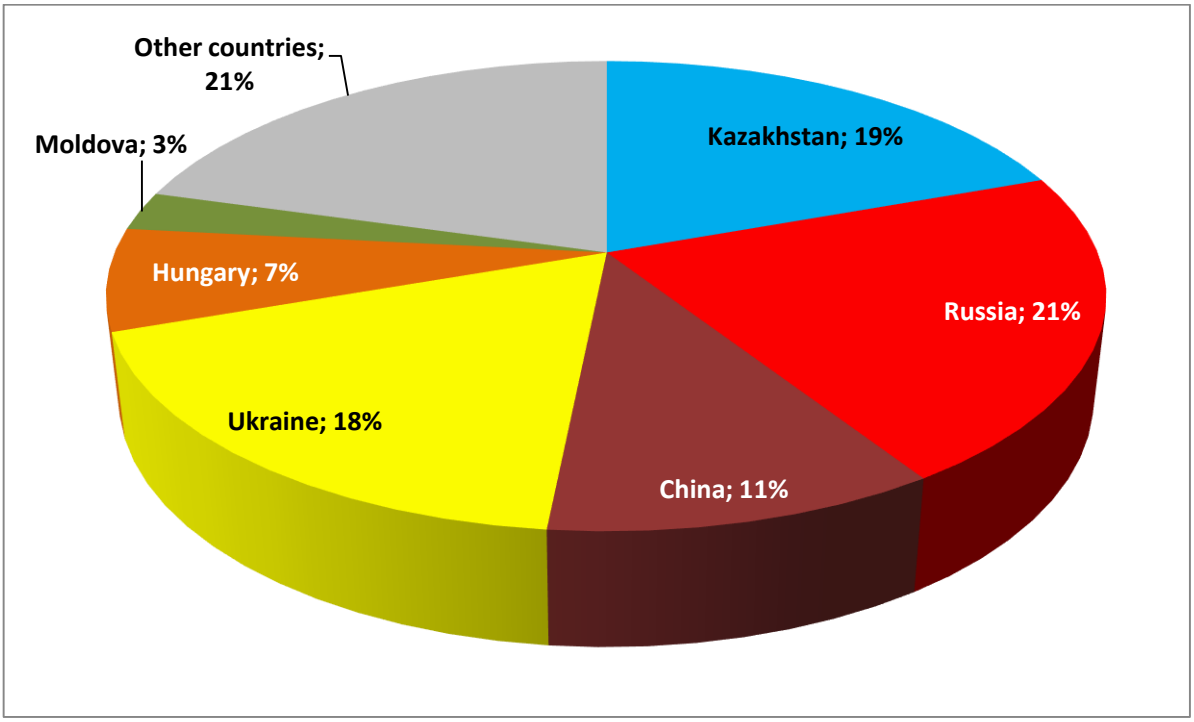
Table 16. Import of fruit juice

Country	2008		2009		2010		2011	
	Thousand USD	share, %	Thousand USD	share, %	Thousand USD	share, %	Thousand USD	share, %
Kazakhstan	2 787	31%	1 685	34%	724	22%	1 569	30%
Ukraine	3 185	36%	1 558	32%	542	17%	741	14%
Russia	1 562	18%	766	16%	815	25%	1 295	25%
Other countries	1 390	16%	904	18%	1 148	36%	1 574	30%
100% import of product	**8 924**	**100%**	**4 913**	**100%**	**3 229**	**100%**	**5 178**	**100%**

Among the country-exporters of fruit juice to Kyrgyzstan Kazakhstan took the leading position: 30% of total shipments for this position, amounting to 6.8 million U.S. dollars for the reported period. Despite the decline in the share of Ukraine from 40% in the period 2003-2077 up to 27% in the reported period in cash Ukrainian suppliers were even winning due to growth of total import volume - 1.3 million U.S. dollars on average in 2003-2007 and 1.5 million U.S. dollars average annual volume in reported period.

As well as four years ago, Russia, Kazakhstan and Ukraine are among the major importing countries. The most noticeable change in the structure of import by country was declining share of Ukraine from 30% to 18%. But, as noted above, all vendors financially benefited. Also note the projected growth in 2008 growth of China's share in import of fruits and vegetables. China is among the leading providers of canned tomatoes and vegetables.

Diagram 20. Geographic structure of import, 2008-2011.

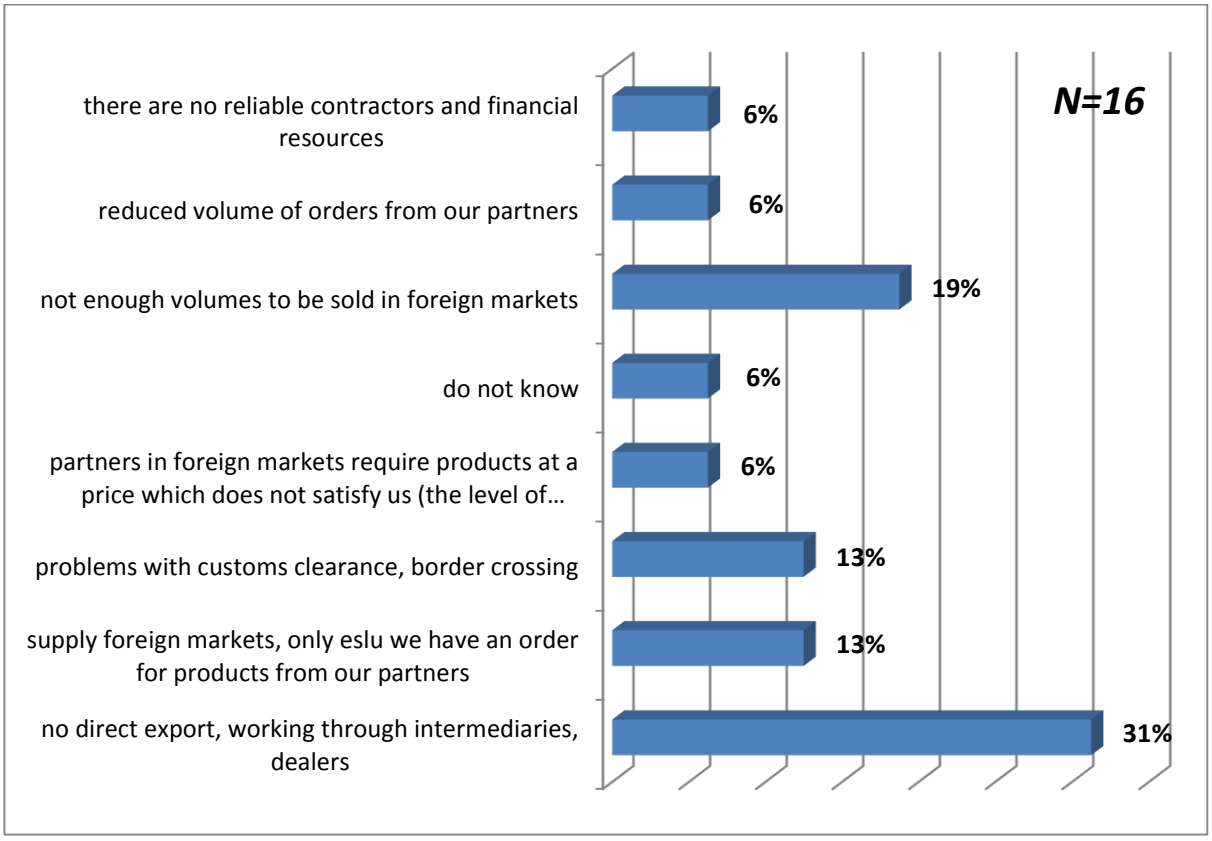


External markets: opinion of enterprises

During the survey, enterprises evaluated differ than in 2008, the degree of significance of the problems they face when working in foreign markets. So, this time only 6% of companies indicated that low prices for products they supplied requested by foreign trade partners are a significant problem. In 2008, this issue has been the most significant – it was marked by 48% of enterprises.

However, enterprises attributed to one of the most important problems of dependence on partners, the lack of direct exports.

Diagram 21. Evaluation of supply problems to the outside markets given by enterprises



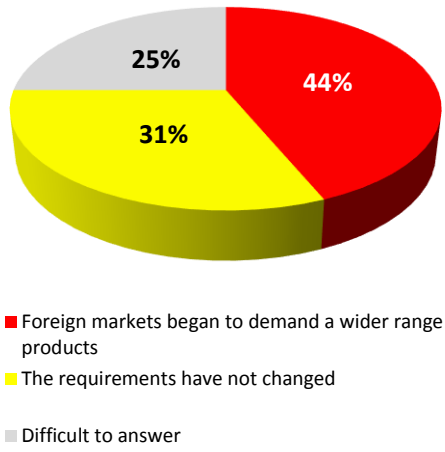
Companies, in the same way as in the previous survey, evaluated situation on foreign markets by six types of requirements from the foreign partner's side:

- Requirements for the volume of supplies;
- Requirements for the assortment;
- Quality requirements;
- Requirements for certification;
- Requirements to finance promotional campaigns;
- Customs requirements and procedures.

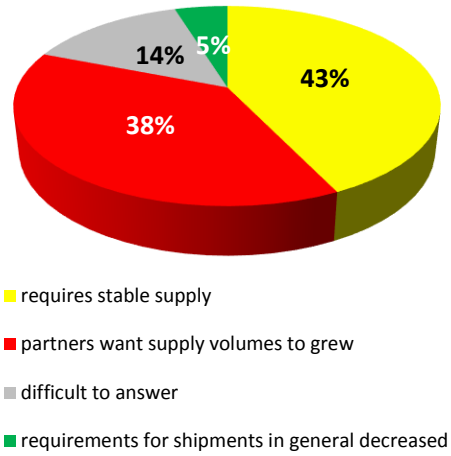
Despite the negative (problematic) assessment of the role of the partner by enterprises the survey showed that all requirements except customs have become "softer" in comparison with the situation in the previous report. Likely, that in many cases, companies themselves have become more consistent with this requirements.

Diagram 22. Evaluation of the change in the situation at the outside markets given by enterprises for the period 2008-2011.

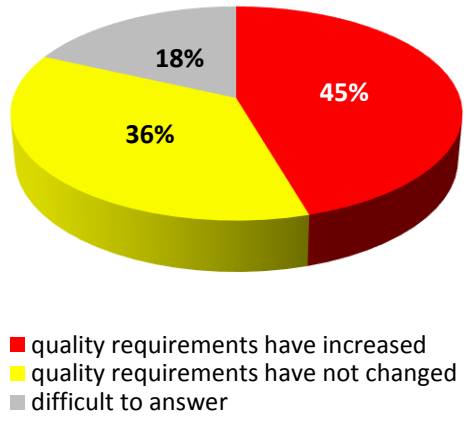
Requirements for assortment



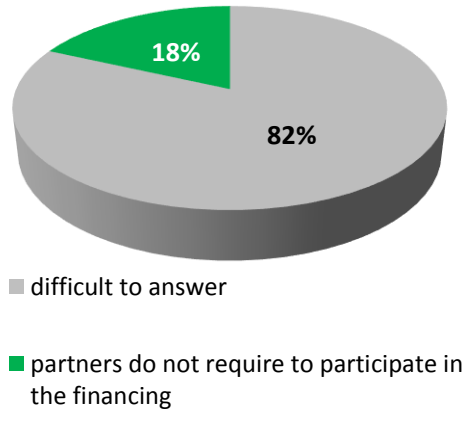
Requirements for supply volumes



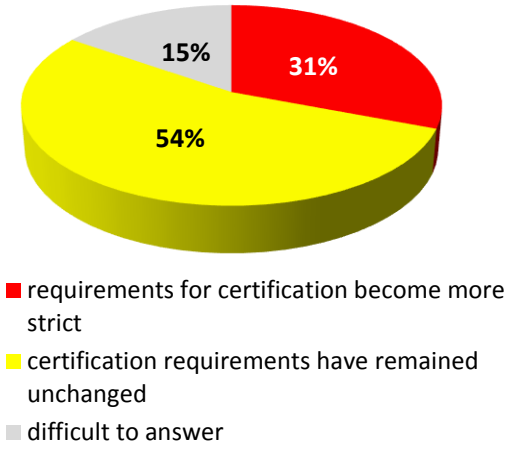
Quality requirements



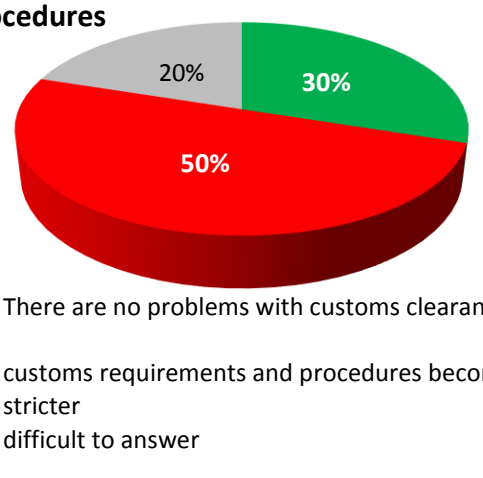
Requirements to fund promotion campaigns



Requirements for certification



Customs requirements and procedures

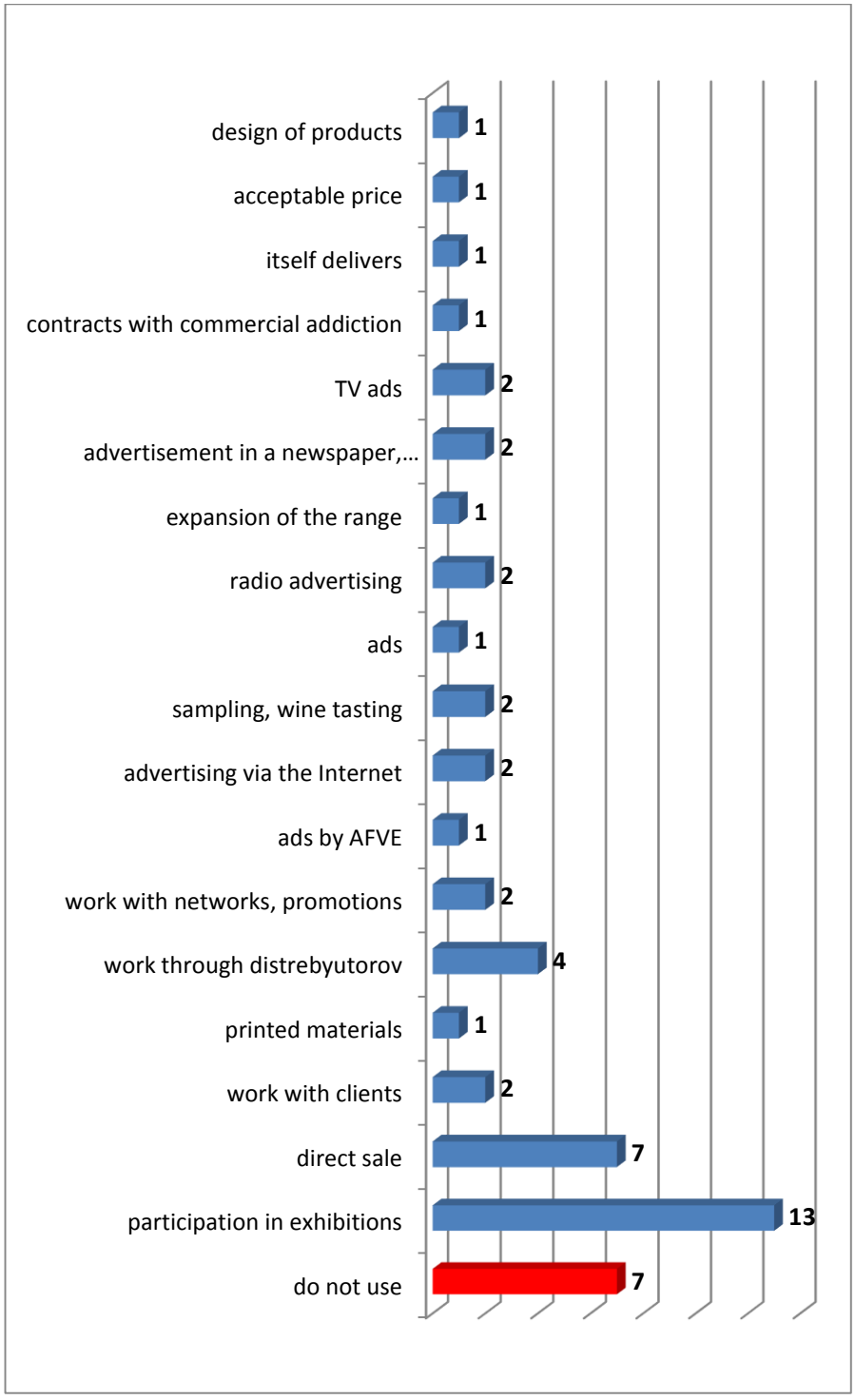


Promotion and Distribution

At present, most enterprises as the main way of promotion of their products use the participation in exhibitions – 41% of surveyed enterprises. 21% of enterprises use direct marketing of products and 13% of surveyed enterprises operate through distributors.

21% of surveyed enterprises do not use any means to promote products.

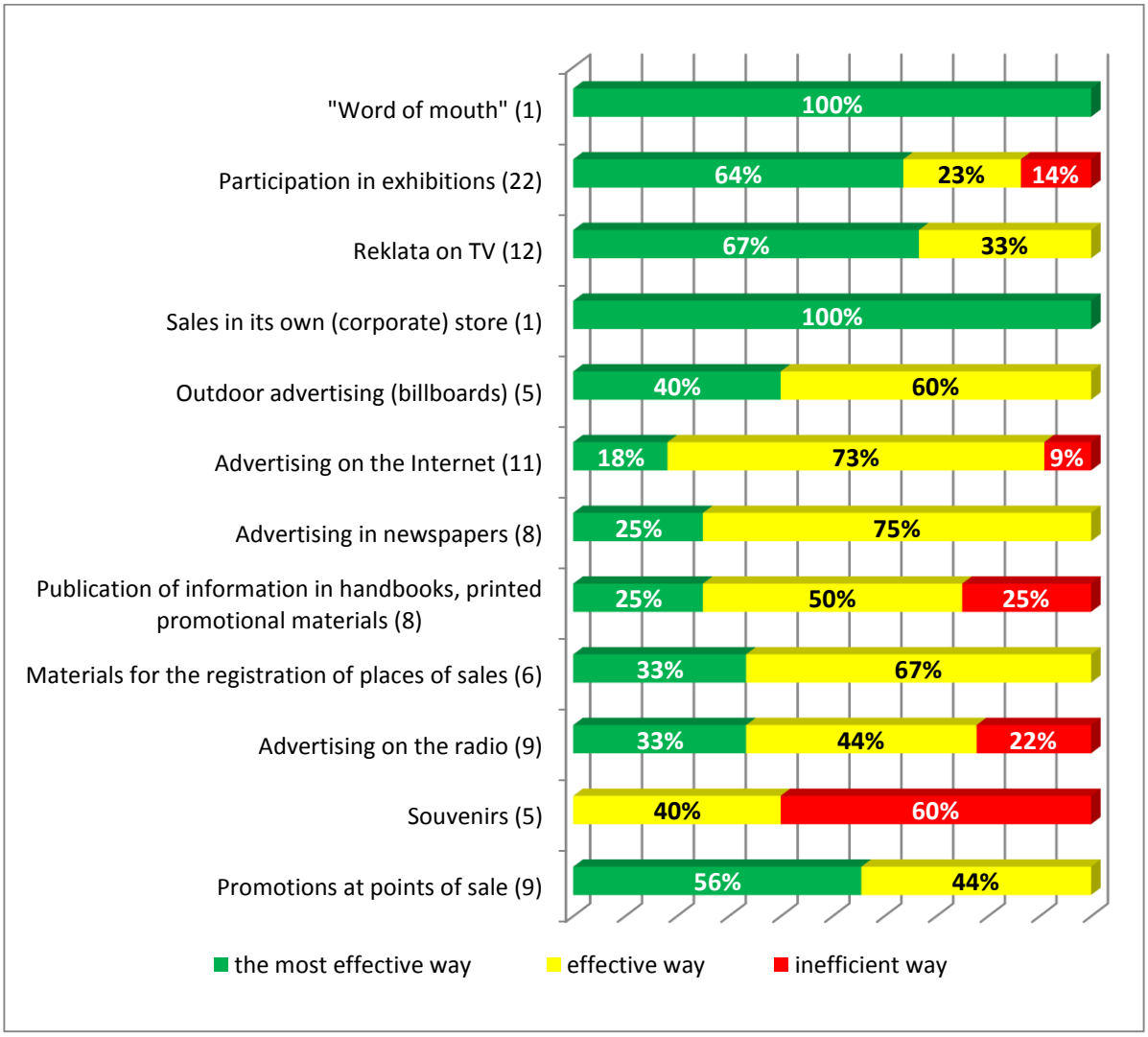
Diagram 23. Use of various ways to promote the product by enterprises



Participation in exhibitions and television advertising – as well as four years ago, considered by enterprises to be very effective ways to promote products. However, over past four years there have been notable changes in the estimation of the efficiency. Thus, only one company considered the most effective way to sell products in our own shop. In 2008, the majority of enterprises (53%) considered inefficient way to conduct promotions in retail outlets, and only 7% of enterprises considered it the most effective. Previous report contained a recommendation to pay attention to this method as very effective. The last poll showed that now the promo campaigns are among the most effective ways – 56% of the enterprises. The survey showed that the number of enterprises, who assess different methods of promotion, consider promo campaigns as effective. The only exception is production of souvenir products.

Diagram 24. Evaluation of products promotion ways effectiveness given by enterprises

Note: the number of enterprises, which evaluated each method of promotion is given in brackets

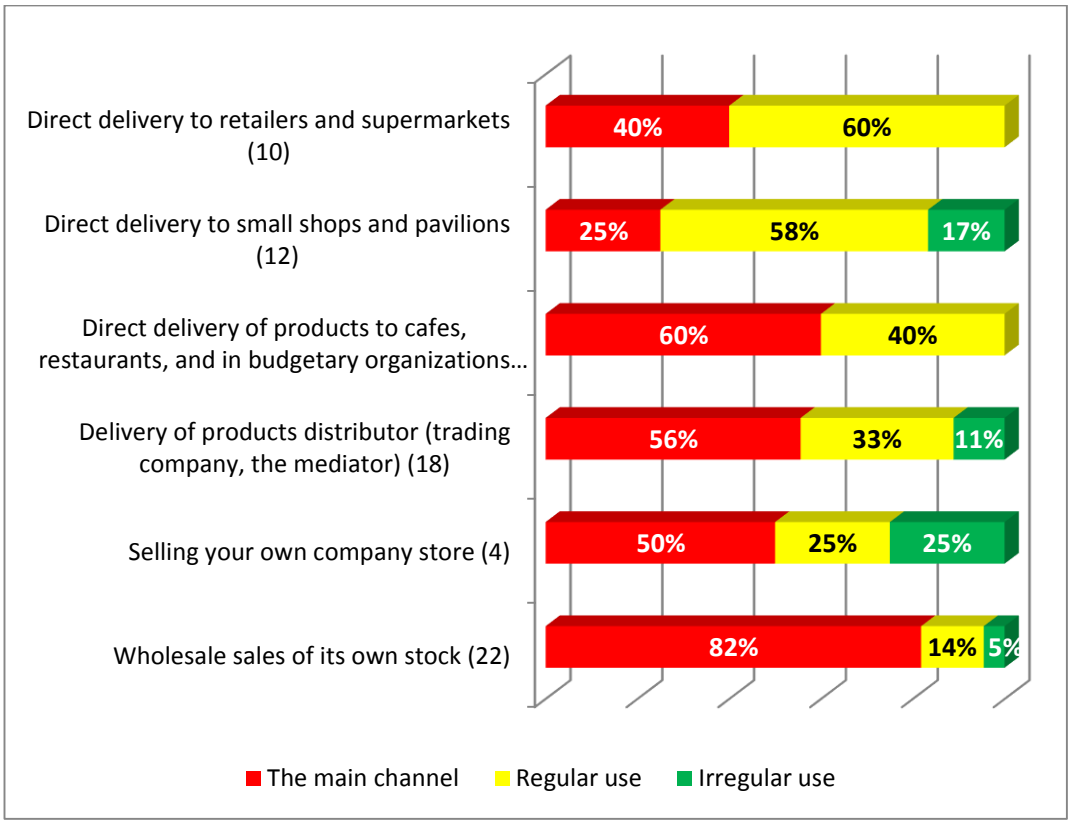


The wholesale sales from own warehouses is the main distribution channel for enterprises. Two-thirds of the enterprises use this channel permanently or regularly. Also the delivery of products to distributor (reseller) is widespread channel, permanently or regularly used by half of surveyed enterprises.

The least used channel of distribution is the sale of products in its own (corporate) store – only 9% of enterprises use this channel with varying regularity.

Diagram 25. Distribution channels used by enterprises

Note: the number of enterprises, who use each distribution channel, is given in brackets



Competition

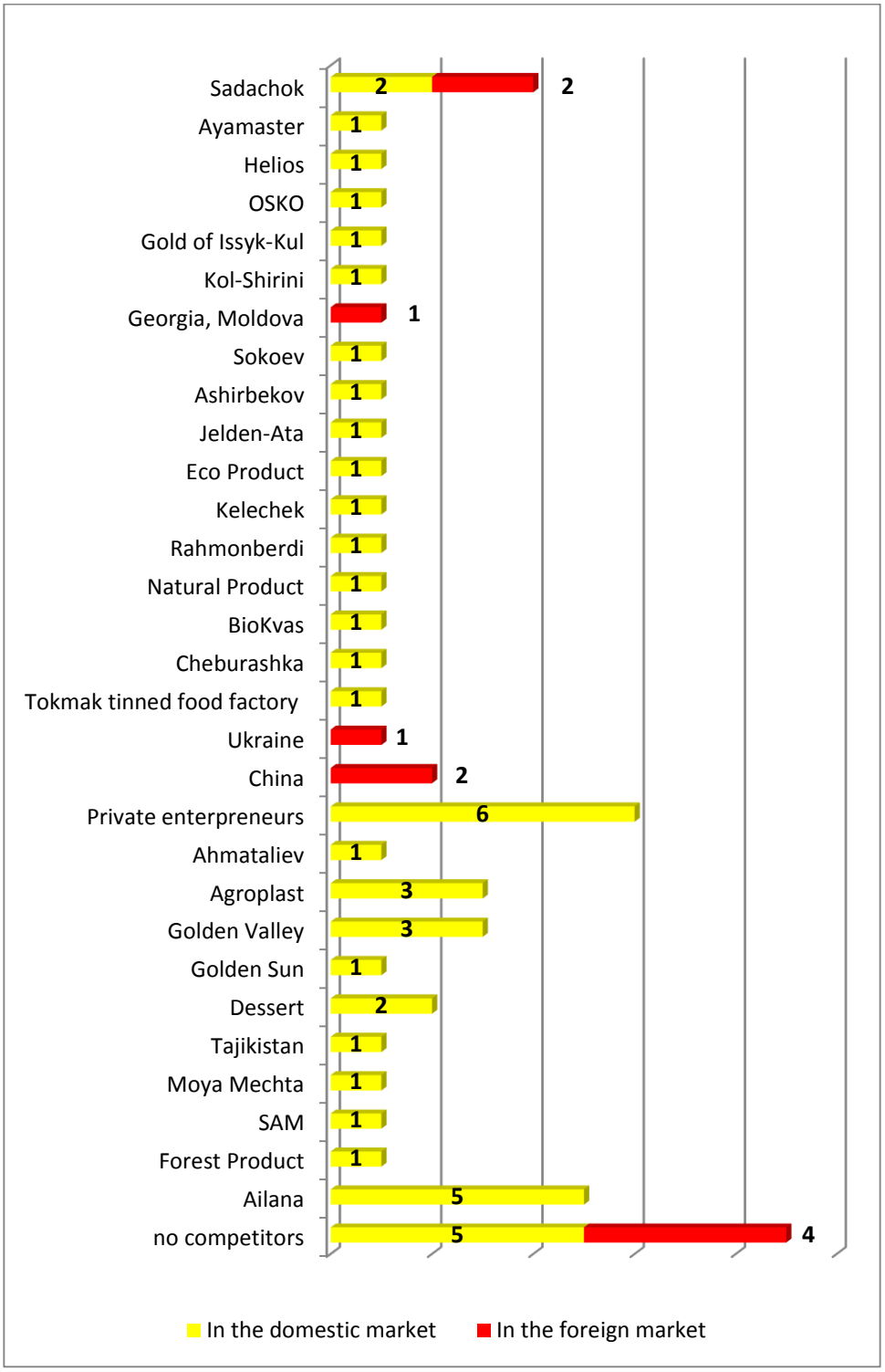
Three of respondents consider that competitive of their enterprise at foreign markets are producers from Ukraine and two companies consider their competitive are producers from China. Among the competitors at foreign markets were also mentioned producers from Georgia and Moldova (one company). 4 enterprises consider that they have no competitors at foreign markets.

Competition at domestic market is more diverse: on request to name the competitors, surveyed enterprises gave 27 answers. And only 6 competitors were mentioned more than once out of those 27.

Private entrepreneurs are leaders in the number of mentions as a competitor at domestic market - six companies consider them as their competitors at domestic market. Apparently, under the "private entrepreneurs" refers produsers of products without brands or even without names. 5 companies consider their competitor at domestic market the company "Ailana" Three companies as competitors mention "Golden Valley" and "Agroplast".

Five enterprises (16% of respondents) consider that they have no competitors at domestic sales market.

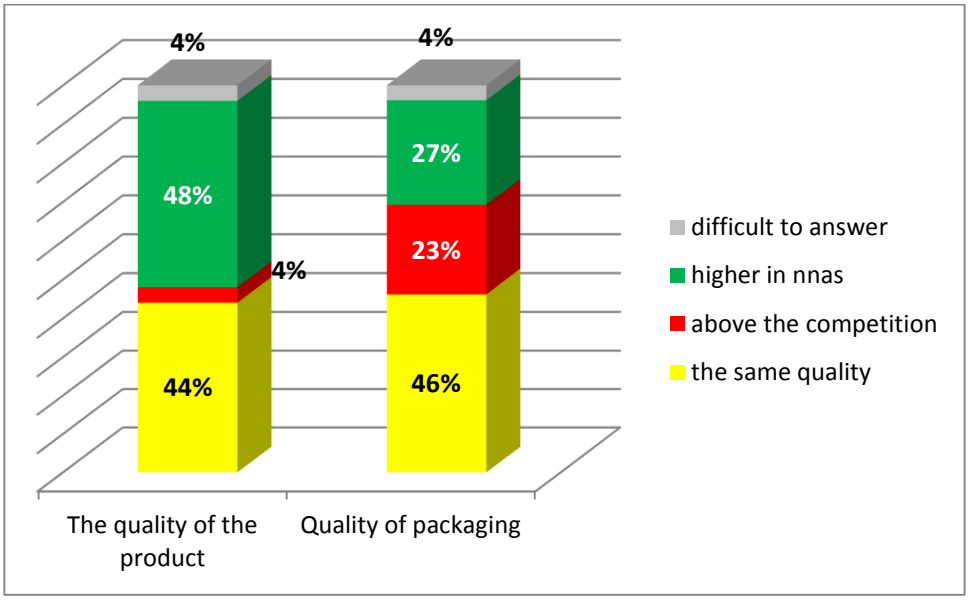
Diagram 26. Competitors at domestic and outside markets, the number of mentions



72% of surveyed enterprises consider that the quality of their products in whole is superior or comparable to the quality of competing products. It should be noted that this is more "modest" estimation than was given by enterprises in previous survey – at that time 83% of enterprises considered the quality of their products superior quality of products of competitors.

59% of surveyed enterprises considered that their packaging is better or comparable to similar of competitors.

Diargam 27. Comparison of quality and packaging of products with competitive analogues



Conclusion

Generally situation in the area of sector product marketing has changed for the better over the past four years. We note two major, in our opinion, positive momentum.

Expanding of sales geography at outside markets

Despite the fact that among surveyed enterprises there was no 100%'s exporters, the situation with the supply of goods to foreign markets on the results of 2011 is significantly better than the results of the previous survey. As a result of previous research company exported products to three countries, while in 2011 – to six countries. Increase in the number of exporting enterprises: 10 enterprises exported products to Kazakhstan (8 in 2007), four companies – to Russia (two companies in 2007).

Change in perspective when working at foreign markets

At this time, companies are really focused on other issues related to the supply of goods to foreign markets. Four years ago the problem, conventionally, were as follows:

- «Our prices are not competitive";
- «We can not deliver the required amount"
- «we have difficulty with certification and customs clearance."

Problems with customs clearance and delivery volumes have remained, but marked by a much smaller number of companies. The question for companies is not in where and how to find foreign partners, but how to reduce dependence on partners who now appeared.

Despite the fact that the gap between import and export fell, import of processed vegetables and fruits in Kyrgyzstan continue to grow. In essence it says on the growth of consumption of these products in Kyrgyzstan, which is fully mastered by foreign manufacturers. Local producers, despite the positive developments in general are still losing the fight for customers in Kyrgyzstan in all major types of products: fruit juices, canned vegetables, product of sweet group.

With regard to export, despite the fact of its growth in absolute terms it is difficult to call it a stable positive change. This growth was achieved almost exclusively by increasing the supply of one commodity item. Dynamics of fruit juice export in general negative for the last four years, the increase in exports of canned vegetables has happened due to the delivery of one year and to one country.

Thus, the question of stability, consolidation of achievements and positive changes is reaming open.

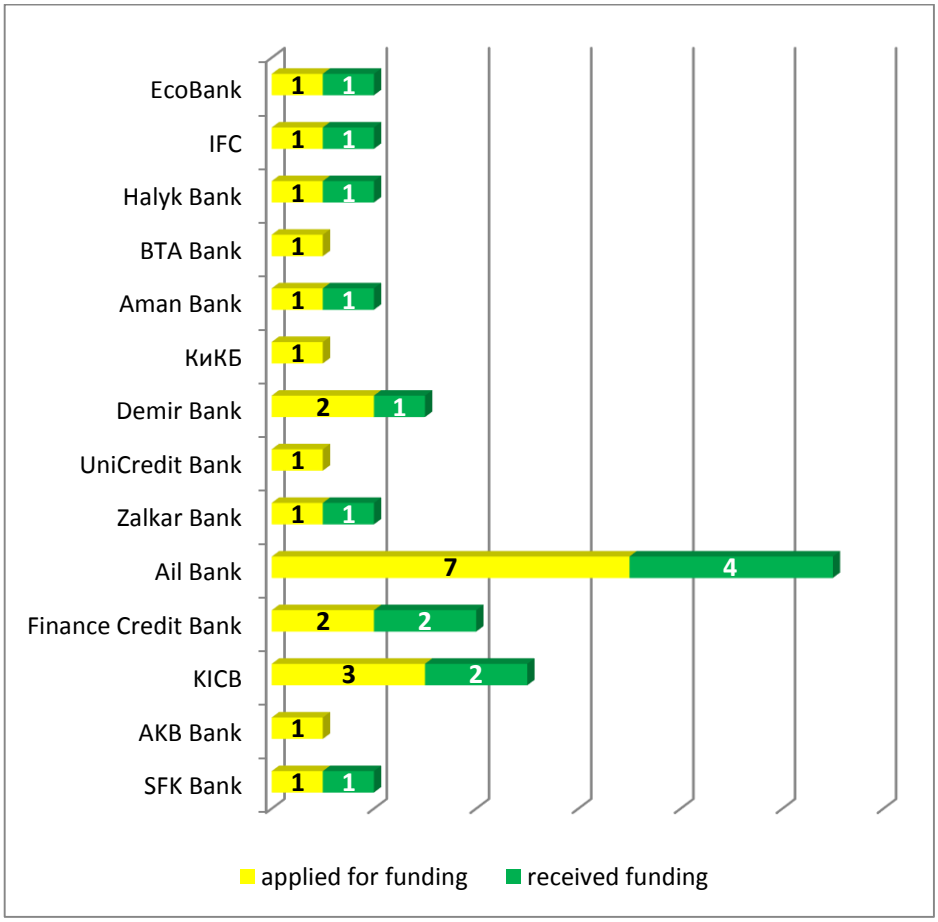
Funding

Over the past five years 50% of surveyed enterprises applied for funding to external sources. 35% of enterprises (73% of circulating) received funding.

The greatest number of requests for funding – (32% of the total number of circulations)- was to "Ail-bank". 14% of circulations were to KICB. For two circulations (9%) among the surveyed enterprises were to "Demir Bank," "FinanceCredit bank". And one more was to eight funding organizations.

"Ail-Bank" has financed 57% of applications, which accounted for 29% of the total number of funded proposals.

Diagram 28. Number of applications for external funding sources made by enterprises



According to this chart out of 24 applications submitted to various funding sources, 63% have been satisfied.

Among the companies who apply for funding, 56% applied for one source of funding and 78% of these requests were granted. Six companies applied for two funding bodies, four submitted applications were granted.

Companies, who do not receive funding, consider that the main obstacles prevent the crediting are the high interest rate and difficulty meeting collateral requirements of banks.

31% out of the number of companies who apply for funding requested funds for working capital. 44% of companies needed financing for acquisition of fixed assets. 25% of enterprises applied for combined financing (fixed assets plus working capital).

According to surveyed enterprises, in order to ensure 100% of production capacity they needed annually over 6.89 million U.S. dollars (own funds and additional funding). The range of the required annual funding is ranged from 5 thousand U.S. dollars to 2 million U.S. dollars per company.

Amount of funding required annually to provide 100% production capacity

Amount of funding, USD	Number of enterprises

from 500 thousand and more (max2 million)	3
100-300 thousand	4
from 61 to 90 thousand	5
from 5 to 30 thousand	7

12 companies (34%) did not identify the required amount of funding.

According to company's opinion they are able to provide own funds at an average 47.2% of required annual funding. However, in this case, the range of opportunities for enterprises is different.

The share of required funding that enterprises can provide by their own funds.

Share of own funds in the amount of required funding	Number of enterprises	Amount of own funding of all enterprises thousand USD
100%	2	indicated as100%
from 50% to 90%	7	2 600
from 20% to 40%	5	400
10%	1	2
Less then 10%	1	0

During the survey companies evaluated credit conditions in banking sector of Kyrgyzstan on seven factors:

The interest rate;

The amounts of credit;

The loan terms;

Collateral requirements;

The procedures for obtaining credit;

Time for loan;

Corruption.

The most significant problems for interviewed companies are:

- High interest rates (for all companies who took credit);
- Complicated collateral requirements.

All other problems company considered as negligible. It is interesting, in contrast to the previous report, that such problem as corruption has almost disappeared, previously the most frequently mentioned as a negative factor.

Conclusion

According to survey the access to finance, as in 2008, is not a significant problem for enterprises. 63% of enterprises who appled for funding received it (in 2008 - 71%).

However, two significant changes should be noted.

First, the need for funding has changed structurally. If according to the previous report, 62% of companies funding requests related to working capital, but this time 69% of companies indicated they applied for financing capital or mixed funding. Moreover, financing of fixed assets required merely 44% of enterprises (19% - in 2008).

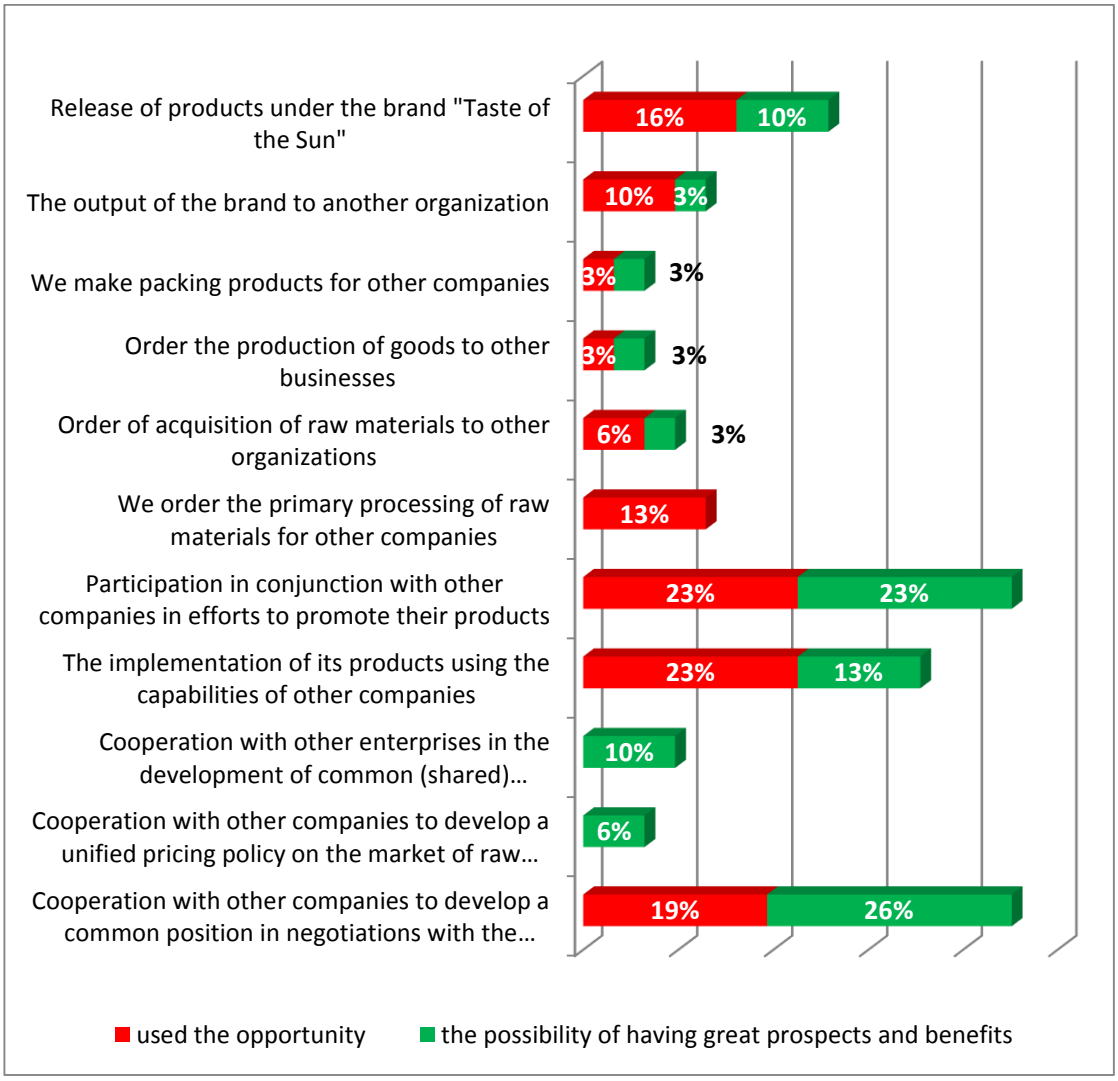
Second, the number of companies applied for funding was decreased from two-thirds of respondents in 2008 to half - in 2012. These data are consistent with information provided by companies on the sources of financing equipment purchases (70% of companies are using for this purpose their own funds).

Obviously, the issue of modernization of production facilities has indeed become more relevant for enterprises - as anticipated in the previous analysis. The financial capacity of enterprises has increased, and desire to take "short money" on proposed conditions decreased, which led to these results.

Integration

The importance of integration for the sector is an increase of total capacity of enterprises in producing and selling products at domestic and foreign markets, in technology development and strengthen the competitive positions. In integration development, there are several courses of action and enterprises during survey were asked to evaluate its usage and future possibilities.

Diagram 29. Opportunities of the integration in the activity of the enterprises



38% of companies do not use any of these integration opportunities.

The most common variants of integration in the activities of enterprises are the sale of products using the capabilities of other companies and joint promotional activities – 23% of surveyed enterprises use this integration options. If the share of enterprises using possibilities of joint promotion was slightly decreased in comparison with the previous survey, the use of opportunities of enterprises in products sales decreased from 50% of enterprises in 2008.

For four years, the number of enterprises who use such integration opportunity was reduced, as the production of products under the brand "Taste of the Sun" (with 34% of surveyed enterprises in 2008). In addition, only 10% of surveyed enterprises consider this integration possibility as the possibility that has great prospects, whereas in 2008 both saw 50% of surveyed enterprises.

In general, in 2008 much larger number of surveyed enterprises thought almost everything suggested in the survey having integration perspective. At this time, assessment of enterprises is much more restrained.

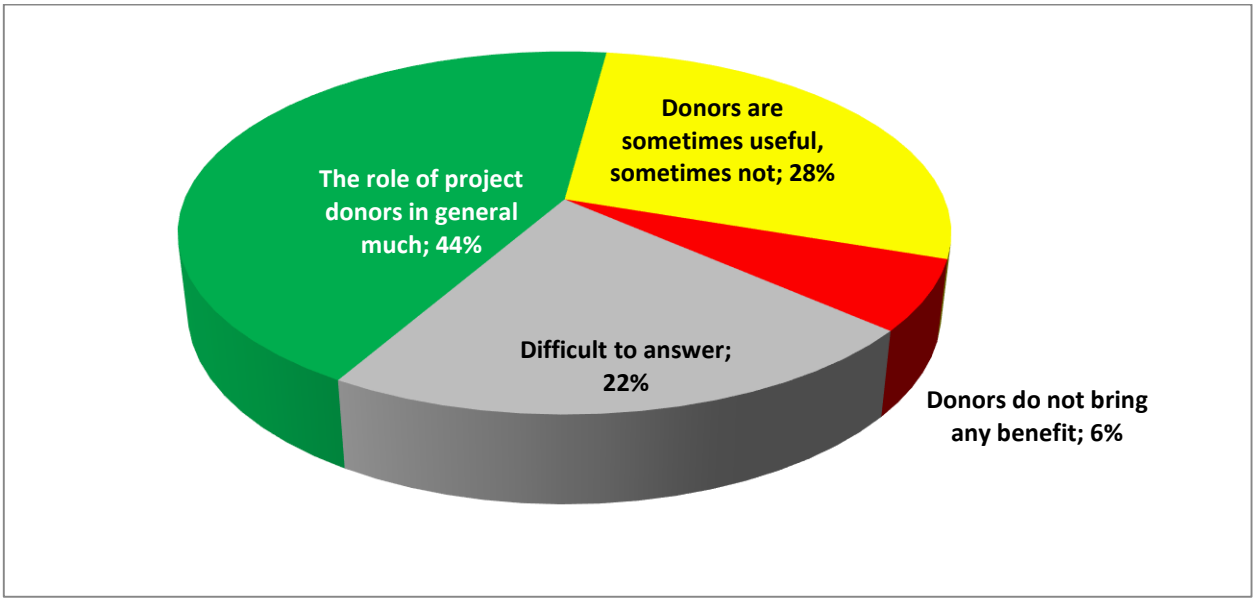
It should be noted that the proposed in the survey forms of integration are general in nature. Any interaction that has potential to improve opportunities of partners, giving results, deserves attention and support of enterprise management, and in each case a form of integration can be very individual.

External environment

This section reflects the evaluation that enterprises gave about the roles of the various members of their external environment, including the state, projects of international organizations and the Association of fruit and vegetable enterprises.

Evaluation of the role of **projects of international donor organizations** virtually not changed for four years – the difference in each of the assessments with the data in 2008 is 1-2%.

Diagram 30. Evaluation of the role of donors project



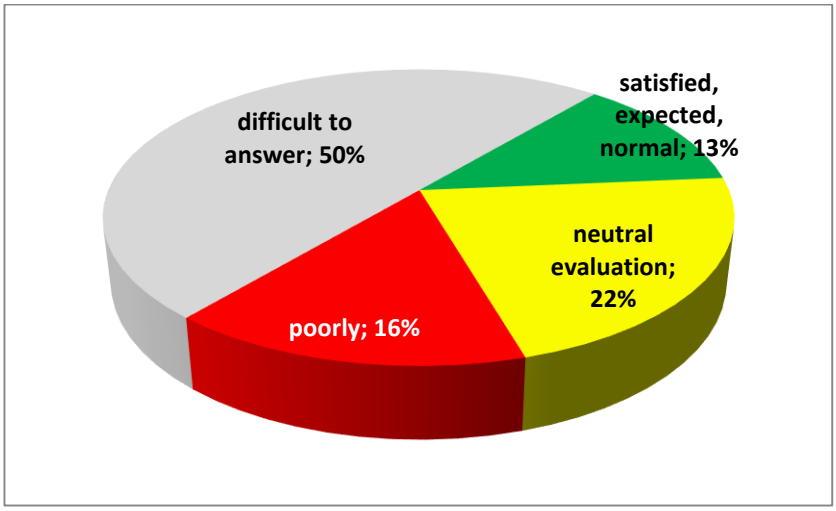
During the nine years since the first survey conducted in 2003, companies within the sector most frequently mentioned Helvetas in the number of organizations whose activities are considered the most successful. However, since 2008 the number of such enterprises dropped from 17 to 12. In addition, in 2008 companies in the survey mentioned a greater number of organizations.

Evaluation of international donor organizations and projects activities

Organization; project	Consider activity successful; number of enterprises
Helvetas (including LMD and partners)	12
USAID	10
GIZ	7
BAS	3
ABCC	3
Europe Union, TACIS	2
FAO	1
UNDP	1
ITC	1
Charitable Foundation «Ata»	1

It is interesting that, in contrast to assessments of international organizations assess the activities of **government organizations and agencies** have undergone significant changes over four years. Half of surveyed enterprises (only 6% in 2008) found it difficult to give any assess. Uniquely negative assessment was given by 16% of enterprises, while in 2008 57% of respondents rated the activities of state structures as negative.

Diagram 31. Evaluation of support from government agencies side

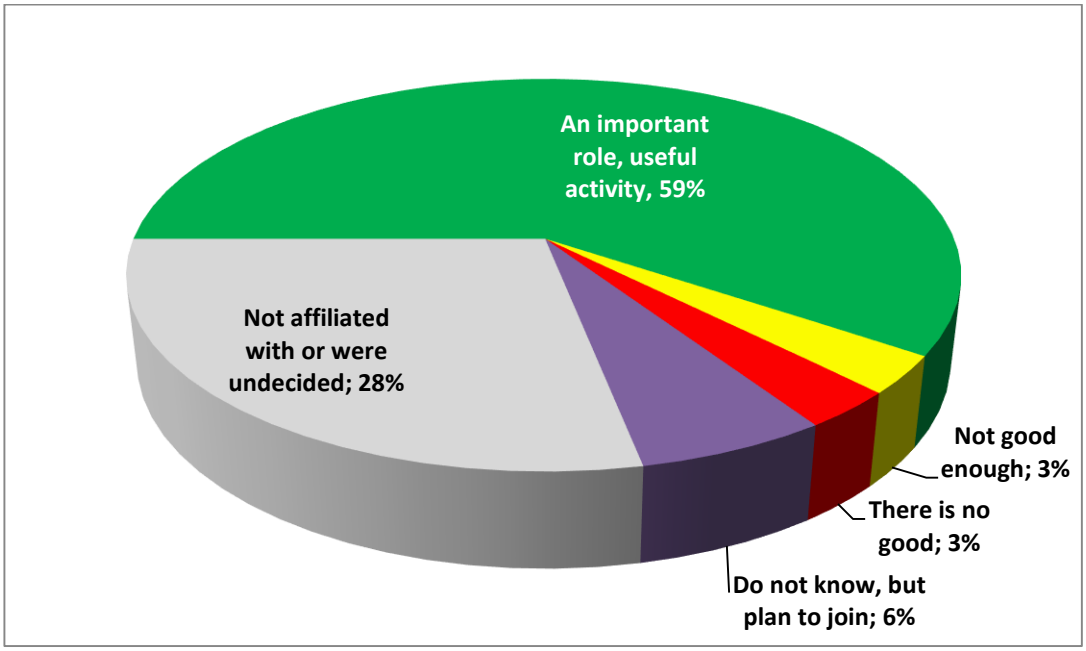


It is interesting, that at the same time, most companies during the survey, considered the state as the protagonist in solving the problems of raw materials. But in general most of the evaluations of state structures, including, largely, and the part of "had difficulty in answering" are neutral, "do not help - and it is good, as long as they do not interfere."

On the request of an example of successful state organization, only one company in the survey indicated "forestry, national parks, state administration."

On 8% increases the number of enterprises considered that the role that plays in the sector **Association of fruit and vegetable enterprises** is important. Taking into consideration that the number of enterprises considers the activities of AFVE minor or no bearing no benefit was reduced from 15% to 6% then we can say that the credibility of association increased in the sector.

Diagram 32. Evaluation of Association of fruit and vegetable enterprises activeties



Companies finances

During the survey, companies gave their assessment of the profitability of different products. Different number of enterprises produces different types of products, so the sum of the responses of enterprises in respect of a particular type of product is certainly not the sort of general consensus as to its profitability. However, when comparing the number of responses with the number of enterprises producing products we can make certain conclusions.

According to the surveyed companies most profitable products are fruit juices. 100% of enterprises out of the number of companies producing these products, were considered it as the most profitable in the assortment. In 2008 71% of enterprises producing juices, considered it as the most profitable product.

92% of enterprises consider canned tomatoes and cucumbers to be the most cost-effective products.

The other products received either significantly fewer evaluations, or the difference in the number of companies that consider these products most or least cost-effective, were very low.

For example, in 2008 enterprises considered that the most profitable product was tomato paste (71% of companies). At this time, only 36% of the enterprises say so and the same number of companies is producing this product, consider it the least profitable.

As in 2008, 36% of enterprises producing products of sweet group consider it the least profitable. But for the four years the proportion of enterprises with opposite assessment has increased from 7% to 43%.

Table 17. The most and the least profitable products according to the enterprises evaluation; number of enterprises

Note:

Каждое предприятие могло назвать по три вида наиболее и наименее рентабельной продукции

Responses of enterprises to the open question.

Each company could name three types of the most and the least profitable products

	Considered the most profitable	Considered the least profitable
Fruit juices	**10**	
canned cucumber, tomato	**11**	1
sweet group, jam	**6**	**5**
dried fruits	4	1
tomato paste, ketchup, tomato sauce	4	4
Fresh cherries, merries, apples	2	
canned beans	2	1
wine materials	2	1
Sea-buckthorn Jam	1	
popcorn	1	
pomegranate juice	1	
frozen berries	1	
vegetable salads	1	1
puree, jam	1	1

drinks, fruit compote	1	1
mayonnaise		1
pear puree		1
tomato juice		1
Strawberries mashed with sugar		1
honey and nuts		1
frozen vegetables		1
canned squash		1
vegetable juices		1

50% of surveyed enterprises answered the question about the structure of production costs. From the responses of enterprises, it follows that the share of direct variable costs (raw materials) is an average of 65% of the cost. Thus the average cost of raw materials in production costs are on average 44%. These figures are higher than in 2008 – while the proportion of variable costs averaged 56%, while the share of the cost of raw materials – 38%. In general, such a change can be considered positive from the standpoint of impact on the breakeven point.

Table 18. Cost articles shares in the unit cost of product

	In average for enterprise, %	Maximum among enterprises, %	Lowest among the enterprises, %
Raw materials	44	60	25
Materials (lids, jars, labels and etc.)	21	40	15
Wages	14	30	8
Power	7	10	2
Transport	4	5	2
Repair and maintenance of equipment	2	4	2
Other	4	24	5
Depreciation	3	3	2
Rent	1	5	2
Total	**100%**		

ACKNOWLEDGEMENT

We thank all managers of the sector companies who took part in the survey, for their time and for the information provided!

"Local Market Development" Project,
Kyrgyz Republic, www.helvetas.kg
Bishkek, 65, 7-Liniya St.
tel.: +996 (312) 21 45 72, 21 45 73
fax: +996 (312) 21 45 78
mob.: +996 (555) 58 39 38
e-mail: Lmd@helvetas.kg
Osh, 428, Lenin St.
tel/fax +996 (3222) 7 42 96
mob.: +996 (555) 51 90 85
e-mail: Lmdosh@helvetas.kg

Association of Fruit and Vegetable Processing Enterprises
Kyrgyz Republic,
Bishkek, 60\a Togolok Moldo str.,
office 315
Tel.: +996 (312) 46-27-44,
tel./fax: +996 (312) 32-50-08,
E-mail: fruit@elcat.kg,
www.afve.org

The Center of Training & Consulting LLC UK
Kyrgyz Republic,
Bishkek, 42 Chehova str.,
tel./fax: +996 (312) 54-74-21
E-mail: ctnc@strategs.com
www.strategs.com

"AgroInformAsia" LLC
Kyrgyz Republic,
Bishkek, 60\a Togolok Moldo str.,
office 315
Tel.: +996 (312) 32-49-78,
tel./fax: +996 (312) 32-50-08,
E-mail: agroinformasia@mail.ru,
www.agro-asia.com