

## PRODUCTS CATALOG













	30DK30001V0	
	MANUFACTURED PRODUCTS	
	Certification	
ALL THE	FEEDS, FEED MATERIALS FOR PRODUCTIVE ANIMALS	
	Soybean mealSoy hullSoy protein concentrateSoy molassesRapeseed mealSunflower meal	
	VEGETABLE OILS	
2	Rapeseed oil Soybean oil Sunflower oil	14
	PRODUCTION FOR FOOD INDUSTRY	
	White flake food-grade soy meal	19
A TO	GRAIN CROPS AND OTHER PRODUCTS FOR RUSSIAN CONSUMERS AND FOR EXPORT	22
	CONTACT INFORMATION	24
2		



# MANUFACTURED PRODUCTS





PRODUCT QUALITY AND SAFETY is of Sodrugestvo Group's priorities. All the raw materials received by the company go through quality and safety checks. We ensure that quality is maintained of our trade and transit goods of third parties, and quality and safety of finished products in the course of production, storage and supply. We share and track flows of products with various names and trademarks, in particular in terms of GM/non-GM.

For operational management of activities on high-quality finished products output the technology of express quality analysis is implemented in the production cycle. The present technology is implemented through the use of in-line and stable NIRanalysers.

Incoming control of raw materials and supplied goods, control over technological processes and finished products in terms of their quality and safety are ensured by internal structural subdivisions, as well as through engagement of independent surveyor and expert organizations, divisions of trade and industry chambers and accredited testing laboratories. Our main partner in the area of laboratory testing in Russia and the FSU is an independent testing laboratory New Lab located in the territory of our production and logistics complex in the Kaliningrad Region. Besides, our modern complex in the Russian Federation accommodates permanent control points of governmental authorities that perform control and supervision over turnover of crops, oilseed and products made by processing them.

All imported and released products subject to conformity declaration, certification or state registration go through the corresponding procedures.

We pay special attention to compliance with requirements and wishes of our customers and consumers of our products and services and that is why we are always open to external audits. Our production, trade and logistical units are subject to regular inspections by such customers as MARS, AAK, WRIGLEY, EWOS, BIOMAR, SKRETTING, NESTLE.

The Food/Feed Product Safety Management System is based on the HACCP principles and complies with ISO 22000, FSSC 22000 standards, which is proved by conformity certificates issued by Russian and foreign certification bodies.

All claims are handled by the Department of Raw Materials and Products Quality and Safety.



















**SOYBEAN MEAL** is a product of soybean processing after oil extraction with the use of additional treatment involving heat and humidity. During soybean processing, the enterprise uses direct extraction with preliminary removal of the soy husks.

The significant protein and energy content of soybean meal makes it possible to create high-protein and high-energy diets without having to use expensive feed components of animal origin. Soybean meal is widely used in feeding all farm animals, poultry and fish.

Depending on the type, age, gender, physiological condition, area and level of productivity, the amount of sovbean meal introduced into the diets of farm animals and poultry may be up to 30%.

QUALITY PARAMETERS:	Low Protein Soybean Meal	Standard Protein Soybean Meal	High-Pro Soybean Meal
CRUDE PROTEIN, %, MINIMUM	46.0	47.5	48.0
MOISTURE AND VOLATILE MATTERS, %, MAXIMUM	12.0		
FAT ON DRY BASIS, %	2.0 - 4.0		
CRUDE FIBRE, %, MAXIMUM	7.0	4.0	4.0

Safety parameters meet Unified veterinary (veterinary and sanitary) requirements for the goods subject to veterinary control (supervision) as of 18.06.2010 Nº 317.



#### Packaging:

Soybean meal is delivered in bulk or in 50 kg bags.



#### Storage:

In clean dry premises as per GOST R 53799-2010.



#### Shelf life for bulk storage:

- meal with mass percentage of fat on absolute dry matter basis not exceeding 2.8% - 4 months; For storage in bags – one year.



SODRUGESTVO

**SOY HULL** is a feed granulated product manufactured from high protein soybean meal and soy oil by direct extraction with prior soybean dehulling and separation of hull from the extractive material.

Separated hull undergoes crushing, wet-heat treatment (toasting) and granulation. Granulated soy hull is used as a supplement feed in the production of combined feed for livestock animals and as raw material for production of fibre.

## QUALITY PARAMETERS:

PROTEIN ON DRY BASIS, %, MINIMUM	10.0
FAT ON DRY BASIS, %, MAXIMUM	6.0
MOISTURE AND VOLATILE MATTERS, %, MAXIMUM	14.0
FIBRE ON DRY BASIS, % MAXIMUM	45.0

Safety parameters meet Unified veterinary (veterinary and sanitary) requirements for the goods subject to veterinary control (supervision) as of 18.06.2010 № 317.



#### Packaging:

Soy hull is delivered in bulk or in 50 kg bags.



**Storage:** In dry clean premises according to the requirements of TU 10.41.72-002-15323453-2007.



#### Shelf life:

max. 12 months from manufacturing date.

**SOY PROTEIN CONCENTRATE** is a purified protein product containing 62 to 72% of crude protein on a dry matter basis. Soy protein concentrate is manufactured from soybean meal released from soluble sugars in the process of alcohol extraction.

Soybean protein concentrate is used in animal nutrition by way of its direct inclusion into animals' diets or for production of combined feed production. Soybean protein concentrate (SPC) is suitable as a feed supplement for all animal, bird and fish species.

Soybean protein concentrate is used successfully in animal nutrition as a high-quality protein source that serves as an alternative to milk substitute and fishmeal. The main advantages of soybean protein concentrate as an ingredient of commercial mixed feed for animals and poultry are the high digestibility of protein, beneficial amino acid profile, low level of anti-nutritional factors and long shelf life.

### Depending on the protein content and particle size, the following product range is manufactured:

- · 62-K (semolina)
- · 65-K (semolina)
- · 70-K (semolina)

Soy Protein Concentrate is produced from non-GMO raw materials.

ORGANOLEPTIC PARAMETERS:	
APPEARANCE	Semolina of 1.0 - 1.7 mm

**COLOUR** 

From light cream to light yellow or light beige

**SMELL** 

Typical for soybean protein products, without foreign smell





PHYSICAL AND CHEMICAL PARAMETERS:	<b>62-</b> K	65-K	<b>70-</b> K
MOISTURE AND VOLATILE MATTERS, %, MAXIMUM		10.0	
PROTEIN ON DRY BASIS, %, MINIMUM	62.0	65.0	70.0
FAT ON DRY BASIS, %, MAXIMUM		1.5	
ASH ON DRY BASIS, %, MAXIMUM		7.5	
FIBRE ON DRY BASIS, %, MAXIMUM		5.5	

Safety parameters meet Unified veterinary (veterinary and sanitary) requirements for the goods subject to veterinary control (supervision) as of 18.06.2010 № 317.

TYPICAL AMINO ACID COMPOSITION (MG/100 G OF PRODUCT):				
LYSINE	4.15	ASPARTIC ACID	7.62	
METHIONINE	0.92	GLYCINE	2.86	
TRYPTOPHAN	0.86	PHENYLALANINE	3.56	
THREONINE	2.58	GLUTAMIC ACID	12.9	
CYSTEINE	0.63	PROLINE	3.48	
ALANINE	2.95	TYROSINE	2.51	
HISTIDINE	1.71	VALINE	3.22	
ISOLEUCINE	2.92	SERINE	3.61	
LEUCINE	5.32			

	<b>(6)</b>
	E 159,50
	П
金銀	Z
	s animals
	productive animals
	Tials for p
	SON Seed materials for Son
8	Seeds, fe
	Contract of the second

## ADDITIONAL RESEARCH:

Metabolic energy (МЈ/kg)	11.36
Glycinin (mg/kg)	<1
B – conglycinin (mg/kg)	<0.1
Lectins (mg/kg)	<0.1
Trypsin inhibitor activity (mg/g)	<1
Calcium, %	0.35
Phosphorus, %	1.00
Protein digestibility (0.02% pepsin), %	90 – 95
Mass percentage of soluble protein (in 0.2% KOH medium)	65 - 70



#### Packaging:

- Polypropylene bags with an insert/paper laminates, net weight of up to 50 kg;
- Soft polypropylene containers (big bags) net weight of up to 1000 kg or as agreed with the customer.

Packaging has the manufacturer's logo and a label inserted into the seam with standard consumer information.



#### Storage:

in bulk or in bags, in clean, dry and well-ventilated spaces at temperatures max. 25°C and relative air humidity max. 75% in accordance with requirements of the Technical Specifications TU 10.91.10-008-15323453-2022.



#### Shelf life

in bulk – 6 months from production date; in bags – 18 months from production date.





**SOY MOLASSES** is a byproduct of soy protein concentrate production. Visually, molasses is a thick syrupy liquid of medium to dark-brown color.

Soy molasses is used as a feed material in production of farm-livestock feeds. Molasses also finds an application in production of biofuels at power industry enterprises.

High sugar concentrations allow using molasses as an additive for enhancing tastiness and increasing caloric value of feeds, thus improving their palatability.

Mass percentage of dry matter in soy molasses is at least 60%.

Safety parameters meet Unified veterinary (veterinary-sanitary) requirements specified for commodities subject to veterinary supervision as of 18.06.2010 Nº317.



#### Packaging:

soy molasses is packed in bulk.



Storage: in ground-level metal tanks with roofing which should be fault-free, securely protecting the molasses from atmospheric precipitations and snowmelt as per requirements of the standard TU 10.81.14-009-15323453-2014.



#### Shelf life:

maximum 12 months from manufacturing date.

**RAPESEED MEAL** is the product of rapeseed processing after oil extraction with the use of additional treatment involving heat and humidity (toasting). The rapeseed processing employed at the factory is based on the fore-pressing/extraction method without the preliminary seed hull separation stage.

The rapeseed meal features has high general nutrient value and digestibility and therefore is a valuable source of premium quality feed protein and well-balanced amino acid supply.

The addition of the rapeseed meal into animal feed diets is one of the key factors of animal breeding intensification, especially in the poultry and hog breeding industries.

## QUALITY PARAMETERS:

MOISTURE AND VOLATILE MATTERS, %, MAXIMUM	8.0 - 12.0
PROTEIN ON DRY BASIS, %, MINIMUM	37.0
FAT ON DRY BASIS, %, MAXIMUM	3.0
FIBRE IN DEFATTED PRODUCT ON DRY BASIS, %, MAXIMUM	16.0

Safety parameters meet Unified veterinary (veterinary and sanitary) requirements for the goods subject to veterinary control (supervision) as of 18.06.2010 Nº 317.



#### Packaging:

rapeseed meal is packed in bulk or packed in:

- polypropylene bags with liner/multilayer paper bags with net weight up to 50 kg;
- soft polypropylene containers (Big bags) with net weight of 1000 kg.



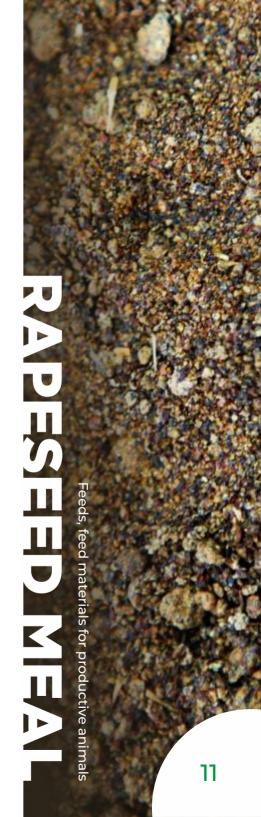
#### Storage:

in dry clean premises in compliance with the requirements of GOST 30257-95.



#### Shelf life:

maximum 3 months from manufacturing date.





productive ani

Feeds, feed materials for

**SUNFLOWER MEAL** is the product of sunflower processing after oil extraction with the use of additional wet-hot treatment (toasting). The sunflower processing employed at the factory is based on fore-pressing method – extraction of sunflower seeds with different degree of preparation.

Sunflower meal is a valuable source of high-quality feed protein with high nutritional value and digestibility. Sunflower meal is used as a feed product by including it directly into animal diets (at homesteads and farms) and for production of combined feeds.

QUALITY PARAMETERS:	STANDARD MEAL	HIGH-PRO MEAL
MOISTURE AND VOLATILES, %	9.0 - 12.0	9.0 - 12.0
PROTEIN ON DRY BASIS, %, NO LESS THAN	39.0	45.0
FIBER IN DEFATTED PRODUCT ON DRY BASIS, %, NO LESS THAN	24.0	18.0
FAT ON DRY BASIS, %, NO LESS THAN	1.5	1.5
TOTAL NUTRITIONAL VALUE ON DRY BASIS, %, NO LESS THAN	0.974	1.055

Safety parameters meet Unified veterinary (veterinary and sanitary) requirements for the goods subject to veterinary control (supervision) as of 18.06.2010 Nº 317.



#### Packaging:

rapeseed meal is packed in bulk or 50 kg in bags.



#### Storage:

in dry clean premises in compliance with the requirements of Producer's Documents



#### Shelf life:

maximum 3 months from manufacturing date.

**RAPESEED OIL** is produced during the processing of rapeseed.

As a rich source of essential polyunsaturated fatty acids similar to the soy oil, it plays an important role in the human vital needs; it is used for the prevention of cardiovascular diseases (reduces the potential of thrombosis in the human organism and level of cholesterol in the blood) and contributes to enhanced metabolic activity.

Taking into account the chemical and physiological properties of rapeseed oil, only refined deodorized rapeseed oil can be used for direct human consumption and in the various sectors of the food processing industry (oil and fat production, bakery, confectionary, canned foods, meat processing).

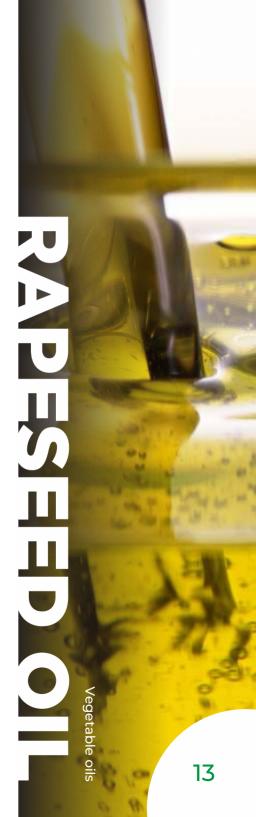
Unrefined rapeseed oil can be further processed into commercial goods or used for industrial purposes. Olso we produce high oleic unrefined rapeseed oil as per order of the customers (minimum content of oleic acid is 72%).

QUALITY PARAMETERS:		MAXIMUM:
F.F.A (as oleic, molec. weight 282), %	(ISO 660)	1.75
Moisture and volatile matter, %	(ISO 662)	0.4
Impurities (insoluble in petrol, ether), %	(ISO 663)	0.4
Phosphorus - 300 ppm = 0,75% as lecithin (conversion factor 25), (expressed as phosphorus), %	(ISO 10540-2)	0.03
Erucic acid, %	(ISO 5508/5509)	2.0



#### Packaging:

200 kg barrels, 1 000 kg barrels, tanks, flexi-containers. Other packaging can be used at the consumer's request.





**SOYBEAN OIL** is a product derived from soybean processing. Soybean oil plays a very important role in the life of humans, since it is a source of biologically active and valuable fatty acids, and is used to prevent cardiovascular diseases and facilitate metabolism.

It is used as a concentrated source of energy, fat-soluble vitamins and essential fatty acids.

Alongside with other vegetable oils, soybean oil should be a mandatory part of the diet that contributes to good health and longevity.

Refined deodorized soybean oil is widely used in food industry, including: oil and fat industry, bakery, candy manufacturing, cannery and meat processing.

Soybean oil is also used in the combined feed, paint and varnish and other industries.

QUALITY PARAMETERS:	BASIS:	MAXIMUM:	
F.F.A (as oleic, molec. weight 282), %	0.75	2.25	
Moisture and volatile matter, %	0.2	0.25	
Impurities (insoluble in petrol, ether), $\%$	0.1	0.4	
Lecithin (expressed as phosphorus) 0.02 0.045			
Colour (1" Lovibond Cell) not darker than 50 yellow and 5 red			
Flashpoint minimum 121 C (250 F)			



14

#### Packaging:

200 kg barrels, 1,000 kg barrels, tanks, flexi-containers. Other packaging can be used at the consumer's request. **SUNFLOWER OIL** is a product obtained by sunflower seeds processing. Sunflower oil is widely used in households both in foodstuff and cosmetic applications, as it is rich in vegetable fats, vitamins A, D, K, B4, and tocopherol, a key antioxidant. Thanks to high contents of oleic acid, sunflower oil reduces cholesterol levels in blood, improves digestion and organism functioning, regulates metabolism, and maintains immunity.

Along with the rest types of oils, it can also be used in technical applications (soap making, paint and coatings industry).

QUALITY PARAMETERS:	BASIS:	MAXIMUM:		
F.F.A (as oleic, molec. weight 282), %	2.0	3.0		
Moisture and volatile matter, %	0.2	0.5		
Impurities (insoluble in petrol, ether), $\%$	0.1	0.4		
Lecithin (expressed as phosphorus)	0.02	0.045		
Colour (1" Lovibond Cell) not darker than 50 yellow and 5 red				
Flashpoint minimum 121 C (250 F)				



#### Packaging:

200 kg barrels, 1,000 kg barrels, tanks, flexi-containers. Other packaging can be used at the consumer's request.





**«WHITE FLAKE» FOOD-GRADE SOY MEAL** is a fat-free protein product, which is the source material for production of food-grade fat-free soy flour and soy grits, textured, concentrated and isolated soy proteins. Used in making bakery products, concentrated foods, meat and fish products in order to enhance their biological value and reduce costs.

Food-grade soybean meal «White flake» is also used for production of semi-finished chopped meat products (cutlets, schnitzels etc.), half-smoked, cooked and uncooked smoked sausages etc.

In pet feed formulas food-grade soybean meal is used as a source of protein and nutrients.

**Baltsoy 70** is «White flake» made using moderate heat treatment. It is used for production of textured soy products and fat-free soy flour for baking, candy, and pasta industries, meat and fish processing, and for effective replacement of dry fat-free milk and egg powder in various food industries.

«White flake» food-grade soy meal is manufactured of non-GM raw materials.

ORGANOLEPTIC PARAMETERS:		
COLOUR	From pale yellow to cream	
SMELL	Typical for soy protein products without foreign smell	
TASTE	Mild, without side touch	
STRUCTURE	Granular homogenized product without inclusions	
SIZE OF PARTICLES	100% through 10 mm meshes	

## PHYSICAL AND CHEMICAL PARAMETERS:

MOISTURE, %, NO MORE THAN	10.0
PROTEIN ON DRY BASIS, %, NO LESS THAN	50.0
NSI CHARACTERISTIC UNDER MEDIUM HEAT TREATMENT	60-79
NSI CHARACTERISTIC UNDER MINIMAL HEAT TREATMENT	80-90
FAT ON DRY BASIS, %, NO MORE THAN	1.3
ASH ON DRY BASIS, %, NO MORE THAN	7.0
FIBRE ON DRY BASIS, %, NO MORE THAN	3.5

Food-grade soybean meal «White flake» is manufactured in compliance with requirements of Technical specifications
TU 10.41.41-001-15323453-2014

#### Nutrients (mg/100 g)

BIOTIN	0.04	VITAMIN B2	0.38
FOLIC ACID	0.03	VITAMIN B1	0.82
NIACIN	3.82	VITAMIN A	100
PANTOTHENIC ACID	2.16	VITAMIN C	1.20
VITAMIN B6	0.55	VITAMIN D	0.5
VITAMIN E	0.5		





Standard amino acid composition Standard mineral composition (mg/100g of product): (mg/100g of product): 0.7 **ALUMINIUM** 0.7 **CYSTINE** CALCIUM HISTIDINE 1.4 280 **ISOLEUCINE** 2.5 **CHROMIUM** 0.75 **LEUCINE COBALT** 4.3 0.1 LYSINE COPPER 1.48 3.4 **METHIONINE IODINE** 0.001 0.7 7.57 **PHENYLALANINE** 2.8 **FERRUM THREONINE MAGNESIUM** 2.1 310 **THRYPTOPHAN** 0.6 **MANGANESE** 3.52 **TYROSINE** 1.8 **PHOSPHOR** 725 **VALINE POTASSIUM** 2310 2.6 **SODIUM** 10 **SULFUR** 404 4.75 **ZINC** 



#### Packing:

- polypropylene bags with insert/paper laminated for net weight up to 40 kg;
- soft polypropylene containers (big-bags) for net weight 1000 kg.

The bags have the manufacturer's logo and the label sewed in the seam with standard information for the customer.



To store in ventilated premises in original packing under temperature not higher than 25 C and relative air humidity of not more than 70% as per requirements of TU 10.41.41-001-15323453-2014



#### Shelf life:

«White flake» grade 70 (moderate tempering) – 12 months from the date of production.

**LECITHIN** is a mixture of fractions extracted from vegetable oils using physical methods. By their nature, the lecithins are the most widespread group of polar lipids, which are present in cell membranes of all living organisms.

Lecithin is a valuable food ingredient comprised of a number of natural vegetable phospholipids. It is used as a highly effective food additive enhancing the emulsifying and dispersing, as well as other rheological properties of various foods, and is used as an antioxidant.

PRODUCT PARAMETERS:	LIQUID LECITHIN (SOY, RAPESEED, SUNFLOWER)		
Consistency	Homogeneous thick liquid		
Colour	From pale yellow to dark brown		
Odour and taste	Typical of its raw material		
Toluene insoluble, %, no more than	0.30		
Acetone insoluble, %, no less than	60.0		
Moisture and volatile substances, %, no more than	1.0		
Acid value, mg KOH/g, no more than	36.0		
Peroxide value, mmole/kg of active oxygen, no more than	10.0		
Colour value of 10% toluene solution, mg iodine, no more than	80.0		
Viscosity at 25°C, Pa.S, no more than	12		

Sodrugestvo Group is a leading Russian manufacturer of high-quality food-grade soy, rapeseed and sunflower lecithin. Our production capacities allow us to manufacture up to 14 tonnes of the product per day in various packaging ranging from 200 to 1 000 kg depending on the customer's needs.



Lecithins are manufactured in compliance with requirements of GOST **32052-2013**, Technical Regulations TR TC 021/2011, TR TC 029/2012.



#### Storage:

in well-cleaned closed metal tanks, protected from sunlight, in clean storage premises at temperatures within 00C to 350C in compliance with requirements of GOST 32052-2013, Technical Regulations TR TC 021/2011, TR TC 029/2012.



If stored in original packing in premises protected from light and heat at temperature  $0^{\circ}\text{C-}35^{\circ}\text{C}$  the shelf life of rapeseed lecithin packed in special tare is 18 months from the manufacture date.

Lecithins are E322 food additives. Specifications relating to origin and purity of E322 food additive comply with Codex Alimentarius standards.

Food additive – liquid soy lecithin E322, food additive – liquid rapeseed lecithin E322 and food additive – liquid sunflower lecithin E322 manufactured in accordance with GOST 32052-2013, complies with TR CU 021/2011, TR CU 029/2012.





**SOY PROTEIN CONCENTRATE (FOOD GRADE)** is a refined protein product containing 62-72% of crude protein on a dry matter basis. Soy protein concentrate is produced of food grade soybean meal (white flake) separated from soluble sugars in the process of alcohol extraction. The basic protein fractions are represented in an easily available form.

Soy protein concentrate is used in food industry for production of meat, bakery and confectionary products.

Depending on the protein content, the following product range is manufactured:

- ·62-K (semolina, 40 mesh);
- ·65-K (semolina, 40 mesh);
- ·70-K (semolina, 40 mesh).

 $Food-grade\ soy\ protein\ concentrate\ is\ produced\ from\ non-GM\ raw\ material.$ 

ORGANOLEPTIC PARAMETERS:				
APPEARANCE	Hom	Homogenous, different degree of particle fineness		
COLOUR	tol	From cream-white to light-yellow or light-beige		
SMELL		Typical for soy protein products without foreign smell		
PHYSICAL AND				
CHEMICAL PARAMETERS:	62-K	65-K	<b>70-K</b>	
MOISTURE AND VOLATILE SUBSTANCES, %, NO MORE THAN		10.0		
PROTEIN ON DRY BASIS, %, NO LESS THAN	62.0	65.0	70.0	
FAT ON DRY BASIS, %, NO MORE THAN	1.5			
ASH ON DRY BASIS, %, NO MORE THAN	7.5			
	5.5			



Food-grade soy protein concentrate is produced in accordance with requirements of TU 10.41.41-010-15323453-2014, TR CU 021/2011.



#### Packing:

Food-grade soy protein concentrate is shipped without tare (in bulk) or packed

- polypropylene liner bags/paper laminated bags with net weight of 50 kg;
- soft polypropylene containers (big bags) with net weight of 1000 kg.



#### Shelf-life:

in bulk - 6 months from production date; in bags - 12 months from production date.



Storage: in a ventilated room in original packing at a temperature below 25°C and TSSV in accordance with TLI 9146-010-15323453-2014, TR CU 021/2011.





On an ongoing basis our company purchases the following goods in Russia and the CIS countries for processing, as wells as to supply them to the consumers of the internal market or for export:

- milling and fodder wheat
- barley
- corn
- soybeans
- rapeseed
- flax
- rye
- pea
- chickpea
- granulated beet pulp
- meal, sunflower cake
- sunflower oil







+ 7 (4012) 30 55 14

#### **BELARUS**

+ 375 (17) 388 52 58

#### KAZAKHSTAN

+ 7 7172 550 515

#### **UZBEKISTAN**

+ 998 90 188 45 07

E-mail: info@sodrugestvo.ru



