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### Article from Russian journal Agrobusiness

The soybean processing plant built on the territory of OAO “Slavyansk Bakery Combinat” in the city of Slavyans (Krasnorad region) has finished its first season of operation. The investor, Agrocomplex im. N.I. Tkacheva, has invested in this new plant 464 mil. RUB (5.1 mil. EUR). The projected capacity of the plant is 100 000 MT per year.

General director of OAO “Slavyansk Bakery Combinat” Mr. Andrey Rusov has told to the Agrobusiness Journal about establishing of the plant and the state-of-the art technologies used the following:

**A:** What technology is used for soybean processing at the new plant? What makes it unique for Russia?

**AR:** The technology is EP1 - it consists of extrusion with consequent pressing. The technology by itself is not new, however such technology with two production lines each equipped with a six-ton extruder and six-ton press hasn't been installed in Russia yet. The technology, equipment and automatic control system for our plant have been supplied by Czech company Farnet. Together with projecting of the building and plant startup the whole process took about one and half year. Of that, installation and commissioning took a year.

**A:** Why can we consider the technology as environmentally-friendly?

**AR:** There is one more feature of this unique technology – the heat recovery system. The heat recovery means utilization of waste steam produced at the extrusion for pre-heating of soybeans, which dramatically reduces steam emissions into the atmosphere.

Besides of that, the production lines equipped with such a large machines reduce operational costs per one ton of production: it is electrical energy as well as other inputs. In the result, we save money and at the same time we protect the environment.

**A:** Which products of processing do you receive at the output?

**AR:** Company Agrocomplex im. N.I. Tkacheva has built this plant namely with the aim to secure self-sufficiency in compound feed production. There are two products of processing – vegetable oil and pressing cake. There is yet a third one, which we can obtain if we would only extrude soybeans without pressing – it is full-fat soy extrudate. Unlike traditional technology, extruded cake turns out to be of more nutritious, which translates positively into weight gain and milk yield.

Earlier, the company was purchasing large quantities of soy cake and meal from other Russian producers for production of compound feed. The new plant has allowed to considerably decrease the share of purchased components and to replace in feed formulas sunflower oil with soy oil. We have succeeded to improve quality of compound feed within our company, to reduce its production costs and to improve the overall effectiveness of the processing branch.

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<https://www.agroinvestor.ru/companies/news/34272-novyy-zavod-agrokompleksa-im-n-i-tkacheva-budet-pererabatyvat-do-100-tysyach-tonn-soi-v-god/>

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## **New Plant of Agrocomplex im. N.I. Tkacheva Company Shall Be processing up to 100 Thousand Tons of Soybeans per Year**

The plant will allow reducing dependency of the holding on purchased feed components

Fig. 1 The investment into the plant has reached up to 500 mil. RUB.

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The soybean processing plant of Agrocomplex im. N.I. Tkacheva company built on the territory of OAO "Slavyansk Bakery Combinat" has finished its first season of operation, having processed 56 thousand tons of soybeans. In the 2020/21 season the company plans to increase the production volume and consequently to get to the full projected capacity – 100 thousand tons, according to the company. The investment costs of the project have reached 464 mil. RUB (5.1 mil. EUR).

In the season 2019/20 the enterprise produced 43 thousand tons of soy cake and 7.7 thousand tons of oil, said Andrey Rusov, general director of the Slavyansky KHP, to Agroinvestor. "In the new season, the processing volume shall increase to 80 thousand tons, of which about 78% is cake production and about 14% is oil production", said Mr. Rusov. The plant is processing exclusively soybeans harvested on own farms of the company. Similarly, purchases of soybeans are not assumed for the new season, according to Mr. Rusov.

Earlier, the company was purchasing large quantities of soy cake and meal for production of compound feed. The new plant has allowed to considerably decrease the share of purchased components and to replace in feed formulas sunflower oil with soy oil. "We have succeeded to improve quality of compound feed within our company, to reduce its production costs and to improve the overall effectiveness of the processing branch", remarks Mr. Rusov.

According to Mr. Rusov, Agrocomplex im. N.I. Tkacheva has built this plant namely with the aim to secure self-sufficiency in compound feed production; there was no primary interest to sell the production. "The share of cakes and meals in compound feed is around 30%. If the Vyselkovski feedmill produces 400 thousand tons of feed, then we need 120 thousand tons just for this one plant" says Mr. Rusov. "We plan to increase the rate of self-sufficiency in raw material as much as possible."

At the same time, the technology and the set of equipment do not provide for any additional options for expanding the product line, continues Rusov. "We are receiving full-fat soy extrudate – a technical product, which is seldom used, as well as vegetable oil and pressing cake. The rest is deep processing, which is much more complex," comments Mr. Rusov. "Should we use the oil for human food, it would require installing further equipment to remove residual soy fibers, to bleach the oil and to bottle it. We are, however, producing for a feedmill."

Agrocomplex im. N.I. Tkacheva (with the brand name "Agrocomplex Vyselkovski") is the largest producer in Kuban region and one of the leading players at the all-Russian market. The full-cycle

agroholding encompasses 29 agricultural companies, more than 700 of various stores and employs 32 thousands of workers. The company is engaged in livestock, crop production, processing of agricultural produces, production of feed products, various trading, etc. "Agrocomplex" ranks second in Russia for milk production, fifth for sugar production and sixth for meal.

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**Andrey Rusov, general director of Slavyansk KHP**

"There is no other plant line that of ours in Russia. It is not about the production volumes. It is the technology itself that is so unique: we have better mechanical and thermal treatment of soybeans. The method is borrowed from Europeans; it is considerably increasing the value of feed. There is just one other plant of this principle working in Europe. Yet one more advantage – the plant considerably reduces emission of steam into the atmosphere."