

## Success factors

The Ministry of Agriculture of Russia reports a record harvest of grain in Russia in 2016: 124 million tonnes. However, the quality of the grain leaves much to be desired. Our journal will tell you how to reach impressive results both in terms of grain volume and quality — see p. 14, 16, 17 and 19.

### One more start before the end of the year

EkoNiva marks the end of 2016 with an opening of new dairy facilities in Voronezh and Kaluga oblasts.

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### John Deere on favourable terms

A number of John Deere machines are now available on favourable terms under the Federal Subsidy Programme 1432.

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## A rapid rise

Since August, the dairy market has been going up significantly. There has been a solid rise in milk prices all over the world. Some processors in Germany have doubled the price. If previously, the price per 1 litre of milk was less than 20 eurocents in Europe, now it has reached the amount of 35 eurocents. I believe that in a couple of months the prices will grow to 40 eurocents. Nobody expected that butter would cost 4,000 euro per tonne, and Gouda cheese — four euro per kg.

The primary reason for this dramatic increase in prices is the drop in milk production volume. Western milk producers spend approximately 30-35 eurocents to produce 1 litre of milk. Considering the investments, the production costs even reach 40 eurocents. When the milk prices stayed at the level of 20-25 eurocents per litre for a long time, many family farmers simply gave up their business. Why keep on making losses? Large farming

enterprises, which were repaying investment loans, were not able to fulfil their liabilities to the bank. In Ireland and the Netherlands production volume continued growing, but the growth rate was slower than it could have been with normal prices.

On the whole, milk production volume in Europe declined by 10%. My acquaintances in the German milk processing industry tell me that if the Russian government removed the dairy product import ban tomorrow, they would not be able to supply cheese to Russia because they simply do not have enough of it.

The global milk price trend is influencing the Russian market. Our processors do not quite understand what is going on but they are also increasing the prices. I think next year, the average price will reach 30 rubles.

Will this price be acceptable for

Russian consumers? This is a sore point. In order to keep the prices stable, many processors will use vegetable fat for dairy production. Generally speaking, there is nothing bad about that if it is indicated at the label. Then the consumer will make a rational choice: to buy inexpensive milk containing vegetable fat or a more expensive natural product.

Next year, EkoNiva will continue increasing milk production volumes. Provided that we receive the subsidies and the conditions for production are favourable, we will consider a possibility of construction of further dairy facilities. We have completely mastered the skill of building dairies, while in the area of milk processing and sale of dairy products, we still feel like first-form students. However, we are sure that in time, we will master this art as well.

*Stefan DUERR,  
President of EkoNiva Group*



# Start button pressed

Marking the end of the year with opening another dairy operation has become a good tradition at EkoNiva.

Last year, another mega-dairy in Voronezh oblast was launched just before the New Year. This year, on the New Year's Eve, rotaries will be operating at two dairies simultaneously — in Voronezh and Kaluga oblasts.

Construction of both Vysokoye Dairy (Liski district, Voronezh oblast) and Bushovka Dairy (Peremyshl district, Kaluga oblast) started in April 2016.

The dairies are almost identical: both have the capacity of 2,800 cows, three barns, a 72-stall rotary and a 16-stall herring-bone milking parlour, five manure lagoons and silage bunkers located at the facility. About 100 people will be employed at each dairy. Around 2.2 billion rubles was invested individually in Bushovka and Vysokoye Dairies, of which 80% was the funds loaned by Rosselkhozbank.

'Pedigree cows were imported to the new dairies from Germany, the Netherlands, Hungary, but a part of them were raised in Russia', reports Ramon Schenk, Deputy Director General for Livestock Production of EkoNiva-APK Holding. 'By our estimation, each dairy is going to produce 26,000 tonnes of milk a year.'

By Oleg PANOV and Ekaterina VORONKOVA

## Innovative ideas

EkoNiva's 'specialist force' landed at EuroTier in Germany, the largest livestock farming trade fair. The herd managers, veterinarians, genetic breeding specialists and engineers examined innovations, searched for partners and upgraded their qualification, looking into the latest achievements of the industry.



The trade fair also housed a conference 'Exporters of Future in Global Dairy Market'. As it was stated at the conference, such countries as Brazil, Pakistan, India and Uzbekistan can become new milk exporters in the global market by 2025.

The topic of the export capacity of Russia was presented by Stefan Duerr, EkoNiva's President. According to him, considerable growth of milk production in the next five years is unlikely. Besides, the processors in Russia have low-efficiency production facilities, which is a considerable obstacle to going into global markets.

In terms of input costs, Russian milk is not competitive without the government subsidies at the moment. However, loan interest rates may be reduced in the future, which would increase the overall

milk production efficiency, and then, Russia could become a global supplier of milk powder, butter and cheese.

The visitors interested in highly productive seeds, pedigree cattle and livestock farming machinery were simply gravitated to the EkoNiva's booth (see more on p.15). EkoNiva, one of very few in Russia, can offer big batches of pedigree Holstein, Simmental and Red-and-White cattle for sale. The company has already sold 4,000 head in the first ten months of 2016 and the orders are still coming. The customers are attracted by good genetics of the cattle that are adapted to Russian environment and management at large-scale commercial dairies.

The guests engaged in livestock farming understandably paid special attention to forage crops, and EkoNiva has great

products to offer: the best alfalfa varieties of worldwide genetics — Dakota and 4020 MF. The varieties are prominent in terms of high protein content, winter hardiness and lodging resistance. OAC Prudence soybean variety is distinguished for consistently high yields, resistance to lodging and shattering.

Each day of the trade fair was bringing new ideas and discoveries to specialists.

'It is interesting to learn about new herd management trends allowing a more detailed analysis of the current herd state', points out Sergey Lyakhov, Siberian Region Director of EkoNiva-APK Holding. 'We looked into equipment optimising bedding management and got aware of new medication for calf intestinal disease prevention.'

By Svetlana WEBER





## Best Supplier of the Year

For the first time in Russia, Danone awarded suppliers not only of milk, but also of packaging, labelling and other goods and services.

**D**anone has six thousand suppliers and forty-five of them were invited to the event to be complemented with commemorative medals and certificates.

'I am thankful to our today's visitors for simply existing', declared Bernard Ducros, Director General of Danone Russia and Vice-President of Fresh Dairy Product Division in the CIS. 'We

will ensure the growth of our companies only if we join our efforts and consider each other's opinion.'

EkoNiva was honoured with the title of The Best Supplier of the Year. The Danone expert board had had to evaluate over 400 suppliers taking milk volumes and quality into account.

EkoNiva and Danone have been

cooperating for over five years. Currently, the overall delivery volume is about 300 tonnes of milk a day or nearly 10,000 tonnes a month. The raw milk is shipped to the processing plants in Moscow, Lipetsk, Tyumen, Kemerovo oblasts and Krasnodar area.

'The quality standards that Danone set for its suppliers five years ago are being officially introduced all over Russia only now', says Sergey Lyakhov, Siberian Region Director. 'At first, the requirements they set seemed to be extremely stringent, but now they are an inherent part of our work.'

Sibirskaya Niva was awarded a special Certificate for Top Milk Quality and Safety, as its milk is used for manufacture of Danone baby food.

'The criteria for milk used for baby food are higher', says Maria Prokopenko, Danone Milk Purchase Director for Siberian Region, 'however, Sibirskaya Niva supplies milk of consistently high quality.'

The Academy of Dairy Sciences also received a special Certificate of the Expert Board, as well as EkoNiva's co-members of Eastern-European Dairy Alliance did: Trio was awarded for the Best Community Project, Voshchazhnikovo Farming Enterprise — as the Most Efficient Milk Producer.

By Tatiana SIMONENKOVA

## The darker the night, the brighter the stars

The participants of the German-Russian Forum discussed new formats of cooperation in the agricultural industry with representatives of Russian-German Chamber of Foreign Trade.

**T**he discussion was joined by German Jeub, Director of Department of International Relationship and EU Policy of the German Federal Ministry of Food and Agriculture, Leonid Gromov, Minister of Agriculture of Kaluga oblast, experts and representatives of farming business communities from Russia and Germany.

With regret, the participants admitted that the mutual sanctions are a dead end for the economic development of the both countries. However, there are new ways out of this crisis.

'The situation with the sanctions reminds of the saying: "The darker the night, the

brighter the stars"', remarks Matthias Schepp, Chairman of Russian-German Chamber of Foreign Trade. 'In spite of all challenges, the dialogue between Germany and Russia continues developing and, moreover, it is taking new directions.'

The prospects of cooperation in agricultural science, education and technology exchange, as well as in the areas of seed growing and biogas production, are quite tangible.

The participants also noted investors' increasing interest in Russia, which is largely caused by the support of local authorities and quality improvements in the legislation. Kaluga, Voronezh,

Novosibirsk oblasts and Krasnodar area were marked as regions with favourable investment climate.

Stefan Duerr, President of EkoNiva, agrees that there has always been a potential for farming business development in Russia, and the sanctions have provided even more development opportunities than ever.

Later, the participants of the German-Russian Forum had an opportunity to taste dairy products from EkoNiva's own processing plant: 'Academic Milk', sour cream, cottage cheese and yoghurt. The good news is that the Academy of Dairy Sciences has launched a delivery service to business centres in Moscow.

By Yulia SALKOVA



## Summing up the season's results

Tomsk Palace of Culture and Sports housed 'Golden Autumn. Harvest 2016' trade fair. The guests from Siberia, Altai and even Vladivostok enjoyed an exciting and eventful day.

Producers of cheese, meat, nuts, fish and many other tasty things laid plentiful tables for the visitors. Children were enjoying themselves at the improvised playgrounds, teenagers were going through a quest dedicated to farming technologies, and 30 machinery units were waiting for farmers at the open-air site next to the Palace of Culture and Sports.

'I think our trade fair is getting better year by year', said Andrey Knorr, Deputy Governor of Tomsk oblast for Agricultural Policy and Natural Resources Management. 'Every year, the range of products is expanding and the quality of

products and packaging is getting better.'

At the round table discussion, the guests and exhibitors of the trade fair discussed the questions of machinery fleet upgrading. EkoNivaSibir is one of the most reliable suppliers of farm machinery in Tomsk. Among the machines displayed at the company's booth were John Deere 6150M and John Deere 8335R tractors and a JCB 531-70 Agri loader. The John Deere 6150M tractor arrived from Kolpakov farming enterprise (Tomsk district), where it had been working successfully for two seasons.

'The tractor has never let us down', says Denis Kolpakov, Head of the enterprise,

'it operates like clockwork. Moreover, our operators will not even get behind the wheel of any other tractor!'

Denis Kolpakov has a large fleet of John Deere tractors, including 5, 7 and 8 Series machines and two previous models of 6 Series tractors.

'I did not think long before buying the last model', shares Denis Kolpakov, 'our enterprise grows potatoes so we needed a 150 hp tractor. We bought the machine in leasing, on favourable conditions.'

Currently, the farmer is considering buying another tractor of this model. After he finishes harvesting, his plans will take shape.

The John Deere 8335R tractor is powerful and cost-effective. This hard-working machine will find something to do at any farming enterprise.

The JCB 531-70 Agri is the smallest of the full-size JCB telehandlers. Despite its compact dimensions, the machine has the capacity of 100 hp and unsurpassed manoeuvrability, which makes it every farmer's dream.

Farmers and representatives of EkoNiva discussed their plans, needs and dreams in a warm and friendly atmosphere.

'It is always pleasant to hold negotiations in a relaxed atmosphere', says Aleksandr Zuyev, Head of Machinery Sales Department of EkoNivaSibir, 'The clients have an opportunity to familiarise themselves with new models, have a closer look at the machines they like and ask specialists the questions they are interested in.'

By Olga ATANOVA

## Season closed – next one coming!

The annual trade fair closing the current farming season took place in Ryazan. Local farmers treated the residents of the area to the fruits of their labour, and farm machinery dealers demonstrated the machines and implements for the new season.

The Ryazan branch of EkoNiva-Tekhnika showcased the JCB 531-70 loader. Due to the unique set of mounted equipment, the machine can be used not only for transportation and unloading but also for cleaning the production site all year round. The range of the mounted equipment includes very interesting items allowing the loader to perform a lot of functions outside its 'job description', for example preparing unused land for tillage or mixing feed for cows. EkoNiva-Tekhnika also displayed the John Deere 6135B (135 hp) tractor at its booth.

'We can consider this farming season finished, but there are many more to come!' says Ivan Glebov, Head of Sales Department of the Ryazan branch of

EkoNiva-Tekhnika. 'We must have the machines which would stand the strain. We are demonstrating the John Deere 6135B, which will serve farmers for many seasons. The tractor is robust and easy to operate, it can be used for soil tillage, sowing or spraying. The CommonRail fuel injection system, regulating the use of fuel depending on the tractor load, makes the machine very cost-efficient.

The John Deere 6135B is very compact. However, it does not prevent the operator from feeling cozy and comfortable. The spacious,

sound-insulated cab has ergonomically designed controls and perfect all-round visibility. The mechanical seat suspension ensures a smooth ride even on the bumpiest surface.

Each visitor of the trade fair had a chance to appreciate the unsurpassed operator control offered by John Deere. The greatest interest was demonstrated by schoolchildren! Many of them confessed that they had never thought a machine operator had such a prestigious work place!

By Yulia SALKOVA







# Day of professional glory

On 3<sup>rd</sup> November, the workers of the agricultural sector of Liski district, Voronezh oblast, celebrated their professional holiday.

The workers of the farming sector of Liski district are considered to be the best professionals in the farming industry of Voronezh oblast. Liski is among the leading agricultural districts not only in Voronezh oblast but in the whole country. Moreover, the district is a perfect example of the 21st century rural area: modern, advanced, rapidly developing!

actually helped our agricultural producers', says Viktor Shevtsov, Head of the district. 'A couple more years under the sanctions, and our farming enterprises will obtain the necessary professional competence to be on par with their competitors in the world market in terms of both cost and labour efficiency.'

Besides their core business, farming enterprises take an active part in the development of the rural areas: build roads, help schools, hospitals and other social institutions. EkoNivaAgro received a prestigious government award 'Kindness City Resident' for its charitable projects in 2016, and fifty-five employees of the company were awarded special prizes at the event.

Aleksandr Rybenko was one of the awarded employees of the company. He received an award for his great contribution to the good results

demonstrated by the company in the district economic competition. Aleksandr Nesterenko, Director of the Right-Bank Operation of EkoNivaAgro, received a special award 'Gratitude of Voronezh Land' and his colleague, Roman Litvinov, Director of the Left-Bank Operation, was awarded as an 'Honorary Worker of the Farming Sector of Russia'.

Ekaterina Kistkina, Chief Cattle Breeding Specialist of the Right-Bank Operation, has been working in EkoNiva since 2009, when she graduated from the Penza Agricultural University.

'Today is our professional holiday, which we celebrate even on a greater scale than New Year or our birthdays because all the team gets together and honours the best workers', says Ekaterina. 'I have been working for the company for seven years and I have never regretted my choice. I love working in agriculture, my profession requires constant self-development and improvement. I wish my colleagues good health since it is an endurance requiring job, happiness and harmony to their families because family is the most important thing in life, love and patience!'

By Oleg PANOV



'The sanctions imposed by the West

## Students of the University n.a. Timiryazev choose EkoNiva

The Career Fair at the Moscow Agricultural Academy named after K. A. Timiryazev showed what young specialists pay attention to choosing a future employer.

Most of all, the students were interested in working conditions, salary and promotion prospects. Future specialists shared that one of the best employee benefit packages was offered by Kaluzhskaya Niva. The key argument was the fact that EkoNiva provided accommodation to young specialists. 'Our students were genuinely interested in the opportunity to work for

EkoNiva', says Elena Kuznetsova, Leading Analyst of the Employment Assistance and Students Relations Department of the

Moscow Agricultural Academy named after K. A. Timiryazev. 'Now we only have to conclude a cooperation agreement with the company. When the official document is signed, our students will do internship at the farming enterprises of the company with pleasure.'

Future agronomists, herd managers, milk processing specialists and livestock equipment engineers were eager to try working for one of the largest agricultural holdings. The students liked the Academy of Dairy Sciences educational project a lot. They said that it is a new trend in dairy production and of course, everyone was happy to have a photo with Cow Marta, one of the characters of the Academy.

By Olga ATANOVA





## Steel power show

EkoNivaSibir turned out to be in the limelight at Agrosib — 2016, although the trade show brought together over 100 manufacturers and suppliers of machinery, equipment, crop protection agents and seeds.

The John Deere 8335R tractor was debuted at the main booth. The state-of-the-art, versatile machine has proven its reliability in field conditions and in the most demanding hauling applications.

'The tractor is equipped with an integrated GPS and a fuel-efficient engine', says Aleksey Burkhovetskiy, Senior Manager of EkoNivaSibir Sales Department. 'Moreover, the operator can monitor the machine performance using the built-in display in the armrest.

The tractor can be used for hauling and it is compatible with virtually all trailed and mounted implements.'

At the trade show, the tractor was showcased in combination with the John Deere 740 sprayer. The latter, by the way, is ideal for medium-size operations. The tank capacity is 4,000 litres. Once filled, it can cover up to 80 hectares.

'The 740 sprayer has a revolver-type nozzle body', says Aleksey Burkhovetskiy. 'It means that the chemical spraying rate can be adjusted easily and promptly.'

The JCB 531-70 Agri Loadall telescopic loader was also exhibited at the booth. It has three steer mode options: front wheel steer, all wheel steer and crab steer. Every year, the model enjoys consistent popularity all over the world.

'The model is actively used both in livestock and crop farming', points out Aleksey Burkhovetskiy. 'The loader is fitted with the integrated LIVE LINK telematic GPS vehicle tracker and immobiliser security system.'

The trade show has proved to be not just a business event — it is something more important for the visitors. The guests — long-standing clients and recent customers from Novosibirsk, Tomsk and Kemerovo oblasts — lingered at the booth and discussed the cooperation plans. As a result, a number of preliminary agreements for machinery supply were reached. Oleg Buchelnikov, growing cereals and oilseeds, was brought to the booth by word of mouth.

'I first came to EkoNiva following my colleagues' recommendations, and we have been cooperating for three years since then', says Oleg Buchelnikov, the owner of Buchelnikov Farming Enterprise and Medyakovskoye company. 'I have already purchased two combine harvesters from EkoNivaSibir. At this trade show, we have agreed on a leasing deal for a sowing unit, and, of course, EkoNivaSibir will continue providing us with after-sales services.'

By Tatyana SIMONENKOVA

## Career immersion

The largest service centre of EkoNiva located in Detchino opened its doors for third-year students of the Academy named after Timiryazev.

EkoNiva's specialists gave the students a tour of the service centre, the storage facilities and the workshops. The future agronomists got familiar with the modern system of spare parts storage and were told about John Deere flagship machines. Then, Willi Drews, Doctor of Agronomy, told the guests about EkoNiva's history and seed growing technologies.

'Students were fascinated by this lecture' says Irina Yudina, Assistant Professor of Agronomy Department in the Agricultural Academy n.a. Timiryazev. 'It was very comprehensible and interesting. One lecture combined several disciplines, which is an uncommon approach for us.'

That day, with theory and practice intertwined, the students could immediately see with their own eyes everything they had heard about, as a picture is worth a thousand words. In Irina Yudina's opinion 'harvest

managers' must have in-depth knowledge of the machinery.

'A modern agronomist can't work without cutting-edge machinery', says Irina, 'that is why the students should navigate through different models of machinery, otherwise, they will be unfit to work.'

Andrey Klemenko, Head of Sales Department of the Kaluga Branch of EkoNiva-Tekhnika, was a guide into the

world of technical innovations.

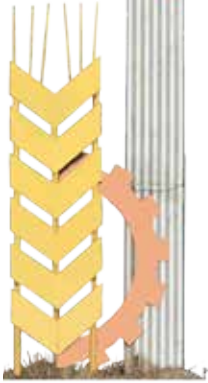
'One of the main exhibits of our collection is a John Deere 9470RT track tractor', says Andrey Klemenko. 'It is a real beast. A powerful engine, unique suspension and the fuel tank enabling the machine to work ten hours without refilling make it heavy-duty and robust.'

According to the future agronomists, these qualities are highly regarded in the field.

By Olga ATANOVA







## Family farming traditions

Gubari village, Borisoglebsk district of Voronezh oblast, is located in a remote, sparsely populated area with dilapidated infrastructure.

After the shutdown of the collective farm, its land was distributed among local farmers.

Sergey Polyansky, a Cossack by birth, and Yevgeny Malikov, a farmer, are worthy successors of family traditions. Sergey Polyansky, Manager of a farming enterprise and Chieftain of the Great Don Army, owns approximately 2.5 thousand ha of land and grows cereal and industrial crops on it. When he was still a child, he started working accompanying his father, a combine operator, as a steerer in the collective farm fields.

After his military service, he was trained as a mechanic engineer at Borisoglebsk Farming School and got a job of a chief engineer at the local collective farm.

'For sixteen years, I worked as a combine operator throughout summers, while in winters, I was busy with machinery preparation and spare part replacement', recalls Sergey. 'I was the winner of numerous professional contests in the district and was even awarded a car for the best crop.'

In 2001, when he started his first farm with 119 ha of land, he had to sell the awarded car to purchase some farming machinery.

'When our former collective farm's land got overgrown with tall weeds, it pained me to see it in such a state. So, I set my mind on taking up farming. I take pleasure in keeping the land in good order', shares Sergey. 'I started with one pre-owned tractor purchased with the money I got from selling my car. After expanding the land area, I bought another tractor like that — those two had a voracious appetite, consuming the equal amounts of diesel and motor oil.'

Polyansky's sons are determined to follow in the father's footsteps: two of them already work in the family business, the third one is still a schoolboy but is already contemplating career opportunities in agriculture. According to the farmer, before the Revolution the village was home to wealthy peasants, they all toiled on the land. There were nine mills in the village, one of which belonged to his ancestors. The Revolution and dispossession of the kulaks (prosperous

peasants) changed everything.

'During the Civil War in 1919, the front line was passing across our area, as a result, the land still spits out shrapnel and 76-gauge shells from time to time', narrates Sergey. 'Currently, the population of the village is 600 people, the majority of them are retired. There are hardly any young people left in Gubari village, as they do not stay here for long — they escape to towns and cities where they have jobs and prospects. Here, apart from six farming operations, there is also an outpatient clinic, four shops, a kindergarten and a school.'

The Cossack considers reinforcement of production capacity his mission. For this reason, he makes a point of acquiring cutting-edge machinery.

'After I bought a new John Deere 8310R tractor, things have tangibly improved,' admits Sergey. 'This machine is much more fuel-efficient and productive than our domestically manufactured machines that we used to have before.'

Farmer Yevgeny Malikov, Sergey's neighbour and 'comrade-in-arms', sets the same goals. His enterprise is known for operating without any loans or borrowings.

'I was born and grew up here in Gubari village', says Yevgeny. 'My father worked as a tractor operator all his life, moreover, he was the only operator of high-power machines on the farm, and my brother and I were always around. Understandably, we opted for a land-related career, fully immersed ourselves in the farming business, and have never regretted our choice. Now, I can't imagine myself engaged in any other trade, for example, sales. Though, we are actually associated with it, as we sell grain, but the core difference is that we also grow it.'

On their land, Yevgeny and his brother grow peas, sunflowers, maize, winter and spring wheat. They have two farms with the total area of 1,000 ha

that operate as one team. The brothers also have three storage facilities and are planning to build another three facilities. Together, they have built and launched a seed-handling facility and now are about to commission a grain dryer to which the gas line is being fitted at the moment. The brothers jointly own not only the land, but also the machinery, including a John Deere straw walker, a rotary combine and a JCB 541-70 handler.

'Both our farms operate as one, therefore we are able to share four full-time and one part-time workers', explains the farmer.

'When it becomes essential to work two shifts, we also get behind the machinery wheel. So far, we are not planning any expansion, though we do have the capacity for that. We are consciously avoiding it, as we are focusing on the yield quality and output at the moment: intensively applying fertilisers, employing modern practices, additionally purchasing the equipment the farms need and using the equipment we already have most efficiently.'

Russian villages will have future if they stay in the good hands of such dedicated farmers. Their efforts will ensure that the land is taken good care of and young people come back to the rural areas.

By Oleg PANOV



Sergey and Yevgeny Malikov, October 2011



## New opportunities for farmers

The John Deere factory in Orenburg has been manufacturing sowing and tillage machinery for 11 years. Initially, it was just a 'screwdriver industry' but now the level of production localisation exceeds 60%.

In 2016, John Deere was included into the governmental programme of subsidising farm machinery produced in Russia launched in accordance with the Regulation 1432 of the Government of the Russian Federation. Now some of the models of John Deere sowing and tillage equipment manufactured in Orenburg are available on favourable conditions. The procedure of subsidy granting has also become less complicated. If the application is approved, the farmer immediately receives a 25-30% discount (depending on the region).

For farmers, this programme is another opportunity to purchase efficient cutting-edge machines at a considerably lower price. Rodion Karageorgiyev, head of a farming enterprise in Voronezh oblast and a client of EkoNiva-Chernozemye, was one of the agricultural producers who benefited from this programme. The farmer bought one of John Deere's flagship models — a John Deere 455 seeder (working width: 10.7 m).

Rodion Karageorgiyev already has two John Deere tractors: a John Deere 8330 (330 hp) and a John Deere 8285R (285 hp). One of the machines was purchased with loan funds in the pre-crisis 2008, and the second one — in 2014. After visiting the John Deere Day at the factory in Orenburg, Rodion decided to buy a John Deere 455 drill. Rodion and a sales manager of EkoNiva-Chernozemye were the only ones out of the 150 guests invited to the event who made it to the John Deere Day by plane. There was a severe blizzard, and it was by pure miracle and due to the outstanding professionalism of the pilot who managed to land the plane onto the runway, which by that time had turned into a pile of snow, that they arrived to the

factory on time. The warm welcome the guests received at the factory was a good reward for this life-threatening experience. Rodion recalls with a smile that on that day, the factory worked specially for him. Upon completion of the visit, he purchased a John Deere 455 drill without any hesitation, especially considering that the participation in the state subsidy programme significantly reduced the financial load on Rodion's small enterprise.

### Rodion Karageorgiyev, head of a farming enterprise:

'Import substitution is a good initiative. However, we need to understand that in order to produce more domestic agricultural goods, the farmers need to increase their yields and improve the quality of the products. This is not always achievable with domestically manufactured machines.

The farm machine manufacturing industry should not be affected by import substitution. Each farmer has the right to choose the machines he wants to use. I preferred the reliable, time proven John Deere 455 to a domestic implement, whose uptime will be ten times less and which will inevitably break down right in the middle of the sowing campaign! One idle day in spring can delay the harvesting by a whole week in autumn! Of course, taking into account the current dollar exchange rate, a farmer can only dream of buying powerful and reliable machinery. John Deere's participation in the state subsidy programme is a good chance for farmers to make their dreams come true.

Unfortunately, the decisions on the governmental level are not made as quickly as we would like to. When I was buying the machine under the state programme,

EkoNiva and John Deere promptly collected and submitted all the necessary documents, but it took ages before the decision was made. Many applications have been refused. I wish there were fewer complications of this kind.

John Deere machinery allows me to work quickly and efficiently. The John Deere 455 increased my yields by about twenty per cent! I use it for sowing both cereal and pulse crops. The emergence is always immaculately even. The implement is good for both conventional and no-till practices and has a large hopper (4,300 l), which can be used for seeds and dry mineral fertiliser.

Next year, I am planning to buy a John Deere 2210 field cultivator. I am completely confident about the quality of this brand. I already have two John Deere 8 Series tractors. One of them has done 6,500 engine hours. I have not had a single problem with the machines! Now I am planning to start buying John Deere trailed implements. In a word, I am switching to John Deere Full Line. It is very convenient when you can buy the full line of machines and implements from the same dealer. This facilitates the servicing and spare parts delivery and speeds up the communication process! I think one should not judge the cost of a tractor by its initial price. The real cost can be justly estimated only when the tractor has done some 5,000 – 14,000 engine hours and you can see how much you have spent on it, whether it has just gone through the planned maintenance procedures or you have had to change a couple of engines and steering columns. I think the John Deere machines will keep on serving faithfully even when my grandchildren take over the farm.'

By Yulia SALKOVA



# John Deere machinery under Federal Program 1432

For the Russian market

## John Deere 730 Air Disc Drill

- LL 8.5 m, spacing — 15 cm
- LL 11 m, spacing — 15 cm
- LL 13.4 m, spacing — 15 cm

## John Deere 1910 Tow-Behind Air Commodity Cart

- 270-bushel grain tank capacity, TBT, two tanks, single-shoot manifold, six individual meter segments
- 270-bushel grain tank capacity, TBT, two tanks, double-shoot manifold, six individual meter segments
- 350-bushel grain tank capacity, TBT, two tanks, single-shoot manifold, six individual meter segments
- 430-bushel grain tank capacity, TBT, three tanks, double-shoot manifold, eight individual meter segments

## John Deere 1890 No-till Air Drill

- Working width — 9.1 m, spacing — 19 cm, single-shoot manifold, TBT, fitted with blockage warning system
- Working width — 10.9 m, spacing — 19 cm, single-shoot manifold, TBT, fitted with blockage warning system
- Working width — 12.7 m, spacing — 19 cm, single-shoot manifold, TBT, fitted with blockage warning system

## John Deere 455 Grain Drill

- Working width — 7.6 m, combination grain/fertiliser seed boxes
- Working width — 9.1 m, combination grain/fertiliser seed boxes
- Working width — 10.7 m, combination grain/fertiliser seed boxes



## High performance and gentle handling

In recent years, sugar beet has established itself in the agricultural market as one of the most profitable crops. Based on the estimates of the analysts, investments in sugar production offer one of the highest and quickest returns. The crucial thing is to produce high-quality root crops. Harvesting sugar beets quickly and without losses is impossible without reliable machinery. EkoNivaAgro has opted for Grimme.

‘Good machinery is no less important for harvesting than for sowing’, says Vladimir Kaznovskiy, Engineer of the Left-Bank Operation of EkoNivaAgro. ‘High performance and gentle handling of the product are both essential for efficient production. The Grimme beet harvesters

are just the thing we need.’

EkoNivaAgro has three Grimme Maxtron 620 beet harvesters. The first one was purchased in 2010, the last one – in September this year.

‘Whatever the weather, these machines run like clockwork’, says Vladimir Litvinov, Chief Agronomist of the Left-Bank Operation of EkoNivaAgro, ‘average seasonal performance of the harvester is around 1,000 ha.’

Grimme developed its first self-propelled Maxtron 620 sugar beet harvester in 2003. For a number of years, the novelty

has been tested in the Russian Black Soil Region. As a result, we have a high-tech 6-row harvester with a 22-tonne bunker and a high separation efficiency. Thanks to the chassis concept with rubber tracks and a rear steering head, Maxtron 620 is the world’s most manoeuvrable beet harvester, which, at the same time, causes the least soil compaction.

The excellent design ensures effective and gentle cleaning via main web and axial rollers across the full width without bottleneck of the crop flow’, lists the benefits Vladimir Kaznovskiy. ‘The bunker is equipped with a 1.8-metre wide high-capacity unloading web which makes it possible to create up to 10 m wide clamps.’

By Olga ATANOVA





## 12 Technical inspection

Over 543 companies from 32 countries presented their developments at Agrosalon 2016 trade show. Machine manufacturers were honoured with awards for the best achievements in the world's farm machinery building.



## Smart technologies for record harvest

Fliegl was awarded the silver medal for its comprehensive harvest transportation control solution, featuring complete documentation system, weight control and the Fliegl Tracker vehicle detection system, which can be custom-tailored to fit different farms.

'Beacons installed on grain harvesters and trucks allow identifying any harvesting vehicle', says Elena Bukhner, Marketing Department Specialist. 'The Fliegl Weight System is the main connecting point, which uses beacons to identify from which harvester the grain is being loaded and which truck is overloaded.'

The guests of the exhibition had an opportunity to see the system in action

at Fliegl's booth. Installed on the Fliegl ULW 30 collecting hopper together with the Fliegl Weight System, it aroused genuine interest.

JCB's booth was no less popular with the visitors. Currently, the line-up of JCB machinery in the Russian market includes twelve loaders available in a wide range of lifting capacity options, varying from 1.5 to 6 tonnes with the lifting height ranging from 4 to 9.5 metres.

'This year was very productive for us' says Svetlana Petrova, Deputy Director General of JCB Russia. 'Initially, we planned a 15% growth, but the market raised by 54% from January to August. It is an incredible result!'

At the trade show, the company presented three agricultural loaders.

The JCB 541-70 Agri telehandler, the JCB 225 mini skid steer handler and the JCB 434S front-end loader as well as 8 types of attachments for all the handlers, including the innovative enlarged silage fork.

'The enlarged silage fork can significantly reduce forage mixing time', says Roman Vityazev, Business Development Manager JCB Attachments. 'It is very convenient for large farms. With a small fork, one has to do more trips to the silage bunker.'

JCB 541-70 Agri is distinguished by its stability and loading capacity. The operator has three steering modes to choose from: two-wheel steer, all-wheel steer and crab walk. The handler has a tight turning circle and high manoeuvrability. The JCB 225 skid steer also has unique advantages. Its radial lift system reduces material spillage.

'It is an efficient substitution for hard manual labour', says Semyon Kostin, Business Development Manager, JCB Russia. 'The unique PowerBoom design means the operators can enter the machine from the left side, which allows them to work faster if they often have to leave the cab.'

Along with the machinery, JCB displayed its LiveLink telematic system.

'It is a satellite vehicle monitoring system', says Semyon Kostin, 'we have been installing this system as a standard option on telescopic and front-end loaders since 2012. Constant monitoring of machines and display of warnings in case of failures allow farmers to avoid unexpected breakdowns and reduce operating costs.'

By Olga ATANOVA







# John Deere Tractors working Buturlinovka fields

The John Deere 8 Series wheeled tractors are the pride of farmers in Buturlinovka district, Voronezh oblast. Directors of Agro-Zarechye and Agroyedinstvo farming enterprises, the owners of these powerful machines, state that they owe the expansion of their enterprises and the increased labour efficiency to the 8 Series tractors.

The John Deere 8R Series tractors are powered by the PowerTech 9.0 I Stage II Standard engines with the high-pressure Common Rail fuel injection system. Depending on the model, their power ranges from 285 hp to 370 hp at minimum fuel consumption. The 8285R tractors are capable of developing the rated output of 285 hp, for the 8320R model this parameter is even higher - 320 hp, which ensures a 12-tonne lifting capacity of the rear hitch. The rated output of the 8335R model is as high as 335 hp.

The John Deere engine is specially designed for field and hauling operations. It has a peak torque reserve of 40% at a wide range of working RPM (1600-2100 rpm), which results in enhanced performance and reduced fuel consumption. The hydraulic system with the base pump capacity of 224 l/min makes it possible to work with the sowing implements requiring a high hydraulic flow to maintain drilling precision with less engine output and fuel consumption.

Every John Deere 8R Series tractor features a reliable PowerShift transmission, a rear 3-point hitch, a PTO, and front and rear wheel weights. All models of the 8 Series are equipped with a closed-centre hydraulic system with the pump output of 227 l/min. All 8R Series tractors are AutoTrac ready, which enables the machine operator to master both direct and curved tracks and work in poor visibility conditions reducing the number of skips and doubles by 90%, which, ultimately, facilitates saving fertiliser,

seeds and fuel. The universal 360° lighting system facilitates unobstructed view in all directions from inside the Command View II comfortable cab.

‘After the bankruptcy of Agrozarechye ten years ago, we bought the enterprise’, says Mikhail Ponomarev, Director of the farming enterprise. ‘At first, we repaired the existing machinery and bought new equipment made by domestic manufacturers, but when six years ago EkoNiva-Chernozemye sold us our first John Deere 8310R tractor, which did 4,000 engine hours in the first year without ever letting us down, our production went up markedly.’

Currently, Agro-Zarechye is a successfully developing enterprise growing corn for grain, winter wheat and sunflower in its fields on the total area of 5,100 ha. The enterprise has three John Deere tractors — 8310R, 8320R and 8335R — and one John Deere S660 harvester at its disposal. In future, the company is planning to expand the range of John Deere machines in its fleet.

According to the Director, the John Deere 8310 R is the veteran of their fields, which has done 12,000



engine hours, requiring repair only once. The tractor was promptly repaired, and brought back to work.

‘After we bought our first John Deere combine harvester and saw its

capacity at minimum fuel and lubricant consumption, we would never agree to use any other machine’, states Mikhail Ponomarev. ‘The machine runs twenty-four hours a day seven days a week, at high speed, covering huge distances — other machines are simply incapable of that!’



Sergey Tivtulov, his colleague from Agroyedinstvo farming enterprise, which grows wheat, maize, barley and sunflower and is engaged in sheep raising and bull finishing,

supports Mikhail’s point of view.

‘When our farmland increased, we noticed that HTZ and Belarus machines couldn’t handle larger volumes of work: the performance was insignificant considering the amount of fuel used’, says Sergey Tivtulov, Director of the enterprise. ‘So we bought a John Deere 8285R tractor in 2013. Gradually, the arable land area reached 4,000 ha, and in 2015 we purchased a second 8335R tractor. Our enterprise has large sowing units which can be pulled only by John Deere machinery. Everybody knows that each hour is precious in agriculture. Making our choice of tractors, we considered not only their performance and efficiency parameters but also the proximity of the service centre to us. John Deere and EkoNiva-Chernozemye met all our requirements. We are sure that John Deere is the best machinery for our fields.’

By Oleg PANOV



## Investment in the future

For a long time, only imported equipment could meet the high demands of modern production, but today the situation has changed. ROMAX and Voronezhselmash, two Russian manufacturers of grain handling and storage equipment, demonstrate high standards of Russian machine building.

These companies offer a full range of grain cleaning, drying and storage equipment, which stands out when it comes to technological sophistication, high efficiency and affordable price. Among the products manufactured by the companies are bins, grain cleaning machines, horizontal and vertical conveying equipment and various accessories. The bins ensure reliable long-term storage of conditioned grain and temporary storage of damp grain with minimum losses and expenses. The equipment is made from galvanised steel, which ensures its corrosion-resistance for over 30 years. Heavy-duty metal and a special design enable them to withstand the snow load of up to 240 kg/sq.m and the wind load of up to 145 km/h. The grain cleaning machinery is efficient and easy to maintain. The throughput range is from 50 to 200 tonnes/h. The drag conveyors are designed for horizontal and inclined grain transfer. The handling speed varies from 5 to 1,500 m<sup>3</sup>/h. The conveyors are also made from galvanised steel and provide gentle but — more importantly — fast grain handling. The receiving cones of bucket elevators and conveyor bottoms have plastic lining ensuring a longer useful life.

'This is the case when Russian equipment

is not inferior to foreign products in terms of both materials and quality', says Vladimir Maryin, Engineer of the Kirov Branch of EkoNiva-Tekhnika, 'that is why we equip the majority of grain drying facilities with domestically manufactured equipment now. The only imported piece of equipment we use is the dryer produced by Mepu, a Finnish company. Unfortunately, there are no adequate domestic replacements for it so far.'

Iskra farming enterprise (Kirov oblast, Kotelnich district) also uses a Mepu dryer. However, all the other equipment at the grain drying facility is manufactured by the Russian company ROMAX.

'Excellent machinery', shares his experience Sergey Gushchin, Head of Iskra. 'We used to buy the equipment of other brands but we invariably faced all sorts of problems the very first season we started using it. With ROMAX, the season went off without a hitch.'

Boris Ozhegin, Head of Agricultural Production Cooperative n.a. Kirov (Kirov oblast, Orichevsk district) also points out the benefits of ROMAX equipment.

'Now, one person can manage all processes,' he says, 'the human

factor has been practically eliminated. Everything is automated. You can set any parameters you need and be sure that they will be observed.'

The dryers are fitted with moisture sensors, which control the movement of grain in the drying column. The remote control connected to the Internet allows monitoring the drying process from a distance and changing operation parameters if necessary.

The grain storage systems are quite fast to build. No more than 2 or 3 months pass from laying the foundation till commissioning.

'The assembly is carried out by a certified crew which is qualified to perform this kind of work', says Vladimir Maryin.

Sredneivkino farming enterprise (Verkhoshizhemye district) has become a pioneer in implementing modern cutting-edge technologies into such a delicate process as grain drying. The company was the first to install Mepu dryers.

'Other companies followed our example', says Nikolay Kharkin, Head of the company, 'directors and specialists from different enterprises visit us, see the result and adopt the practices.'

Before starting the construction of the facilities, the company performed detailed calculations and analysis.

'In order to be able to dry 1,000 tonnes of grain per day, we had to install two drying facilities,' says Nikolay Kharkin, 'the Kirov branch of EkoNiva arranged a meeting with the Finnish manufacturers for us in Moscow. We had a good opportunity to discuss everything and then set to work.'

Besides stationary grain dryers, EkoNiva-Tekhnika offers portable dryers with the capacities ranging from 2.5 to 20 tonnes/h. Two dryers of this kind operate in one of the divisions of Krasnoye Znamya (Kumeny district). The assembly was performed by EkoNiva's specialists. It took three weeks to complete the assembly works.

'It is a very convenient, cost-effective and functional option', says Vladimir Maryin. 'The facility does not require a solid foundation. If needed, the dryers may be taken apart and reassembled at any other location convenient for the operation.'

By Olga ATANOVA







# There is no good farm without reliable machines

The best achievements in livestock production were displayed at EuroTier 2016 trade show in Hannover, Germany. EkoNiva and its clients took part in this global event.

Forty representatives of farming operations from Novosibirsk, Moscow, Voronezh and Lipetsk oblasts came to the trade show in the framework of the trip organised by EkoNiva.

The tour of the exhibition started with the visit to EkoNiva's booth where Stefan Duerr, President of the company, welcomed the guests. He wished the farmers good luck in their search of new ideas, shared his own experience in the area of dairy farming, told about the development of pedigree cattle breeding and seed growing and trading and invited the guests to join the efforts for the development of agriculture.

After the meeting with Stefan Duerr, the group set off for the tour of the booths of the world's leading farm machinery manufacturers.

'This year, farmers are interested in a wide range of machines: from compact loaders to giant forage harvesters and mixer wagons', says Gennady Nepomnyashchy, Regional Director of EkoNiva-Tekhnika. 'The most important thing is optimisation and improvement of the quality of all operations in livestock production.'

One of the first destinations of the group was John Deere's booth. The most popular exhibit was the new John Deere 8000 (380 – 845 hp) forage harvester. Besides the new design, the machine now features upgraded disposition of the essential components. Due to the longitudinal engine layout, the new forager features an improved airflow through the entire machine and enhanced visibility. The John Deere 8000 has 'lost' 800 kg as compared to its predecessor, which together with the bigger tyres, decreases soil compaction.

The Dura-Drum cutterhead with reverse sharpening ensures superior nutrient



quality and forage processing at 1-mm roll clearance. The integrated Agricultural Management Solutions system, besides AutoTrac and RowSense, includes the Active Fill Control (AFC) which helps to save harvesting time due to direct filling of the trailer on the go.

'It is a truly high-class machine', says Evgeny Avdeyev, Chief Sales Manager of Otkormochnoye CJSC (Tula oblast). 'It operates with immaculate precision and every component is thought-out to the smallest detail. The machine is very powerful. It harvests

at 30 km/h while consuming 18% less fuel than the previous series models.' JCB demonstrated a complete lineup of loaders for livestock production. The guests showed great interest in the JCB Radlader Agri front loader with articulated chassis, a 0.4-m<sup>3</sup> bucket and the lift capacity of 400 kg. This compact machine can replace human labour on a farm, at a storage facility,

an elevator or a chicken barn.

At BVL's booth, the farmers learned about new capacities of the Vmix mixer wagon. Besides mixing and distributing feed, the machine can also blow straw and add water to the feed to avoid dust. BVL also focused on extending the uptime of the machines due to more robust parts and components.

The trade show prepared many more pleasant surprises. For example, the farmers were absolutely amazed with the versatility of the three-axle ASW push-off trailer with the capacity of up to 40 m<sup>3</sup>. The multiple attachments allow the machines to transport and reload silage, grasses and other crops, snow and other loads.

'Our enterprise has been engaged in livestock production for over forty years', says Nikolay Pletnev, Head of Konyp farming enterprise (Kirov oblast). 'EuroTier is, in the first place, an idea generator. I am grateful for this opportunity to see cutting-edge livestock farming machinery and equipment. One cannot do without it now. There is no good building without a good foundation as there is no good farm without reliable machines.'

By Yulia SALKOVA





## Five factors to high quality

According to the data provided by the Russian Ministry of Agriculture, 2016 has seen a record crop of cereals and pulses in Russia. The output of grain is 124 million tonnes, including 75.8 million tonnes of winter and spring wheat. A lot of farming enterprises which bought seeds from EkoNiva-Semena received over 5 tonnes/ha of winter wheat. However, in terms of quality, the crop is often rated Class 5, whereas the share of Class 3 wheat is mere 10%. What are the issues preventing enterprises from receiving a high-quality crop?

For the first time in recent years, the price difference between high quality Class 3 wheat and Class 5 fodder wheat has exceeded 2.5 thousand roubles/tonne, according to the data of SovEcon analytical centre. With the yield of 5 tonnes/ha, the financial losses amounted to 12.5 thousand rubles per hectare.

Let us analyse what measures need to be taken to ensure consistent harvesting of Class 3 grain and how much they will cost.

Crop quality is affected by the following five major factors.

### Factor 1

One of the most important factors is the effect of nitrogen fertiliser. Production of 0.1 tonnes of wheat grain requires from 2.7 to 3 kg of active nitrogen.

The shortage of nitrogen leads to a lower protein content in the kernel. In Germany, the average gross yield

of winter wheat is 8 tonnes/ha. To achieve that level, grain producers apply around 180 kg/ha of active ingredients of nitrogen fertiliser. Unlike German producers, Russian farmers tend to save costs on nitrogen fertiliser. They also apply the same 180 kg/ha of fertiliser but in bunker weight, not in the active ingredient equivalent.

needs to be applied in winter wheat fields. Nitrogen fertiliser can be applied not only in early spring during tillering to promote vegetative mass growth and formation of additional stems, but also at later stages — to encourage generative organs development and protein accumulation. Split nitrogen fertiliser application at EC 49 phase



Depending on the expected harvest, the preceding crop and the soil type, from 80 to 120 kg/ha of the active ingredient

(awn emergence) will not produce a significant yield increase (only about 6%), however the protein content in







the grain will increase by 12% (Guenter Jacobs 2014).

Additional application of 40 kg of carbamide with a sprayer will cost an enterprise 1,000-1,500 roubles/ha, but the fertiliser will enable growers to secure the high crop quality. EkoNiva-Tekhnika offers powerful sprayers to fulfil the task, such as the John Deere 4730, and the set of nozzles required for the application of liquid forms of fertiliser in the late stages of wheat development in order to prevent the stand from burning.

### Factor 2

If the actual winter wheat harvesting takes place more than 10-12 days past the deadlines, the harvest quantity and quality drop dramatically. According to scientific research (A.A. Sukharev, N.G. Ignatyeva 2014), leaving soft winter wheat in the field for additional 15 days would result in the loss of 0.64 tonnes/ha of harvest (mainly through grain shattering) and reduction of gluten content from 27.7% to 24.4%. Grain quality is impaired by root sprouting. Scientists conventionally divide the process of seed germination into two stages: latent and visible germination. Although in the first stage, we are unable to observe emergence of radicles or shoots, serious changes in the seed are setting in already. The stored nutrients get transformed into more available compounds to promote germination, thus reducing the protein quality. However, equipment of farms with the most up-to-date grain harvesters settles the issue. For instance, starting from 2017, EkoNiva-Tekhnika will offer the

most high-performance straw walkers. Both the John Deere 660 and the John Deere T670 models have all the properties required to be a market leader, i.e. direct crop flow, which produces a less damaging effect on the grain and straw, and the largest active separation area if compared to any other straw walker.

### Factor 3

The choice of the variety is paramount not only to attain a high yield, but also to ensure the high crop quality. For example, winter wheat variety Gubernator Dona, which used to be



Lgovskaya 4

among the varieties offered by EkoNiva two years ago, very often demonstrated root sprouting and lost protein quality when left in the field for too long. Today, the company offers only the varieties with high germination resistance, such as Lgovskaya 4, Skipetr, Aset, Rozkishna, Nador and MV 3714. All of them are universal type varieties with a high genetic potential in terms of yield and grain quality. Spring wheat variety

Triso is the quality leader in Western Europe. It shows amazing performance provided that all the technological requirements and recommended nitrogen fertiliser dosages are observed.

### Factor 4

Considerable grain quality deterioration in wheat can occur due to pests. Chinch bugs cause the greatest damage to protein quality. Once the crop is affected, profound biochemical changes take place in the grain under the influence of powerful proteolytic ferments released by the chinch bug's salivary glands when it punctures the kernel. Grain with over 3 % of kernels affected by chinch bugs is not suitable for bread production.

A double insecticide treatment (which may be combined with fungicide treatments and nitrogen fertilising with carbamide) scheduled in the crop management helps to solve the problem.

### Factor 5

Growers should never forget to protect winter wheat against leaf and spikelet diseases. Damage of the leaf and the spikelet by fungal mycelia entails early maturation and discontinuance of protein accumulation. EkoNivaAgro implements two fungicide treatments in its crop management practices: one at the flag leaf stage and the second one — at the head emergence stage. The treatments are cost-effective when the yield is over 5 tonnes/ha. If the expected yield is lower, a single fungicide treatment at EC 39 (flag leaf emergence) stage will be sufficient. Specialists of EkoNiva are always at your service to help you to improve your farming practices and receive high-quality grain.

By Willi DREWS,  
Doctor of Agronomy, Advisor of EkoNiva





# Efficient manure handling

Manure transportation is an expensive and labour-intensive process. EkoNivaAgro has implemented a solution for this task at its dairy in Verkhny Ikorets: the previous manure handling system has been replaced by pipeline transportation.

The 2,800-head dairy produces 400 m<sup>3</sup> of manure per day. The manure is transported to the fields of Zarechye.

The pipeline system for liquid fertiliser handling includes the following components:

- a tractor coupled with a manure tank to transport the manure from the cow barns to the lagoons holding 20,000 m<sup>3</sup> each;
- a pump to mix the liquid fertiliser and break up the crust on the surface;
- an auger to mix and raise manure solids from the bottom;
- a pump station to transport the manure from lagoons to the fields. The station can pump over 3,000 m<sup>3</sup> of manure daily;
- a 4.3-kilometre main composite pipeline (each pipe component is 200-metre long) to transfer liquid

fertiliser to the fields; — a tractor with a manure spreader to apply the fertiliser into the soil or on the surface — depending on the operation type.

It is a bit too early to talk about any material results now, since the system was launched only in September, 2016. The technology itself was adopted after visiting farms in Canada. The equipment was supplied by Selkhozproyekt.

Like any novelty, the pipeline system of manure transportation has its pros and cons. Advantages include increased efficiency, fuel saving, reduced fertiliser application time and labour cost saving — the system can be handled by no more than three employees. One of the disadvantages of the system, however, is that it takes more than 6 hours to install the pipeline in the fields.

‘We used to transfer large amount of manure to the fields by tractors’, says Evgeny Mitin, Agronomist of the enterprise. ‘This process was difficult and rather expensive, taking into account that liquid manure does not contain a lot of nutrients since its main component is water which evaporates from the surface of the

fields. In other words, we used a huge amount of labour, time and money to apply large volumes of water in our fields. The pipeline system of manure transportation solves this problem.’



Moreover, the company is planning to build a small manure separator to make bedding from dried manure solids. Liquid manure will be pumped straight to the manure separator where the solids will be separated from the liquids. The solids will then be dried and used as bedding while the liquids will be transported into the lagoons for further application into the soil. It means that the company will have a closed bedding production cycle. This will help the management of EkoNivaAgro to solve the eternal problems of straw bedding delivery and disposal.

By Oleg PANOV







The Plant Breeding Department of EkoNiva-Semena, Kursk oblast, has developed new highly adaptive soft winter wheat varieties and submitted them for state trials in 2016.

## Wheat hardened off

In the majority of Russian regions, wheat is subject to harsh winter conditions: sharp temperature drops, insufficient snow cover, ice crust and water stagnation.

The stands are greatly damaged by air and soil droughts. Relative air humidity, as a rule, decreases in June-July when the kernel formation and ripening takes place. If drought comes after severe winter, the yielding capacity is 20-80% reduced as compared to the years with optimum moisture content.

Climatic factors encourage the development of such pathogenic organisms as mildew, brown rust, root rots, leaf blotch, fusarium ear blight, loose and covered smut and viral diseases. Besides, the snow mold (*Fusarium Nivale*) has also spread widely in recent years.

The climatic conditions call for varieties with a high genetic potential resistant to stress factors of the winter and spring-summer vegetation periods, capable of securing consistently high yield of quality grain.

There are no ready-made forms, which would simultaneously combine high winter and drought resistances, resistance to other stress factors and high yielding capacity. It is known that varieties with high winter hardiness mostly have a lower yielding capacity, and, vice versa, varieties of an intensive type are not winter-hardy enough.

At the present time, varieties of

different usage types integrating economically-useful traits in their genotype have been developed in a joint effort of Russian and foreign plant breeders. EkoNiva-Semena grows commercially the seeds of five of these varieties, most of all complying with the ever-growing requirements of modern agricultural production. They are the intensive-type varieties: Lgovskaya 4 (the Russian Federation), MV Nador and MV 37-14 (Hungary) and universal-type varieties: Skipetr (the Russian Federation) and Rozkishna (Ukraine).

With increasing climate continentality, significance of adaptive breeding is also growing, thus work at EkoNiva-Semena is focused on developing highly adaptive varieties resistant to biotic and abiotic environmental factors. Parental pairs from geographically remote locations were used for crossing, which was instrumental in the creation of diverse breeding material combining valuable traits of the initial varieties.

Varieties with fundamentally new traits have been developed as a result of the plant breeding work: the universal-type, environmentally-oriented winter wheat varieties featuring invariably consistent yields, a positive response to high soil fertility, maximum power input efficiency and resistance to biotic and abiotic factors.

Three best varieties, which were confirmed to exceed the yield of the reference variety Lgovskaya 4 (8.87 t/ha), have been submitted for the state testing in 2016. The increments

of the new breeding lines over the reference variety are as follows: Lutescence-1009 (9.67 t/ha+0.80 t/ha), Erythrosperrum-1377 (9.71 t/ha+0.84 t/ha), Erythrosperrum-1406 (9.98 t/ha+1.11 t/ha).

They can be hardened off well in the autumn period, which is promoted by high soluble carbohydrate (sugars) content in the tillering nodes. Due to the high sugar reserve accumulated in autumn and its efficient use during the winter, the plants show high resistance to negative overwintering conditions.

A positive role of carbohydrates in regrowth has also been revealed. Lutescence-1009, Erythrosperrum-1377, Erythrosperrum-1406 accumulate around 38-41% of sugars on a dry basis at the beginning of overwintering and preserve 26-28% by the end of the winter period, which attests to economic use of the reserves and a significant energy potential of the plants before the beginning of spring regrowth. The varieties are referred to the high winter-resistance group with a rating of 4.5-5 points.

These medium-height varieties are characterised by increased growth rates in autumn and intensive regrowth in spring, which enables the plants to use efficiently the scant moisture supply after late-harvested predecessors in autumn and melt water in spring. The universal-type varieties are suitable for both intensive and regular growing practices.

By Andrey ZVYAGIN,  
Agronomist-Plant Breeder of Zashchitnoye LLC







# Perfect cow exists!

Every farmer craves to have the best cows in his herd. But where can one get the perfect cows and do they exist at all?

**E**koNiva has been engaged in selective breeding aimed at creating the perfect cow every farmer dreams of for six years already. According to Valeria Serebrennikova, Breeding Department Head, the perfect cow is, in the first place, a highly-productive cow with high protein and fat content in the milk. Such an animal is supposed to have a long productive life and physical traits making it less predisposed to mastitis and lameness. At the same time, the type and stature should fully match the breed standard. 'Six years ago, we launched our programme of the herd's genetic potential improvement', shares



Valeria. 'We started specifically picking the bulls carrying the genes for the traits essential to us. For that, we found partners marketing good bulls and started artificial insemination of our cows.'

With the average 2,000-litre milk production increase per head a year across all the breeds, improved type, more

homogeneous herd, higher fertility — consequently, higher genetic value — the company can declare solid results achieved in six years.

Today's local Red-and-White cows whose previous generations were



bred with imported Holstein semen demonstrate dramatic type difference: the udder has changed, now it is more tub-shaped and tighter attached to the body. The strengthened ligaments prevent the udder from sagging even after numerous calvings.

The current achievements are the outcome of long-term efforts. Buying semen today, one can expect to see the first actual results only in three years. Apart from that, consistent teamwork with the herd is also crucial.

'A breeder's duty is to lay the best possible genetic foundation of the herd', believes Valeria. 'The rest depends on thorough teamwork of all specialists at a dairy, starting from an agronomist responsible for forage crops ending with a herd manager and a vet creating

perfect conditions for the perfect cow.' Valeria considers the cows in her care really perfect.

'Our cows have premium genetics', proudly shares Valeria. 'They are no worse than their peers in Europe and America. Our Holsteins produce 10,000 kg per head a year, Simmentals — 8,000 kg, Red-and-Whites and Swiss Browns — 7,000 kg. The cows are healthy and robust, they were born and raised in Russia, so, they are fully adapted to our environment.'

The value of EkoNiva raised pedigree cattle is acknowledged in the market. This year, 4,000 pedigree cows have 'moved into new homes' in various regions of Russia and the CIS.

By Svetlana WEBER







A profession normally chosen by women is frequently called 'woman's work'. One does not often see a male calf caretaker. The main character of this article is convinced that women working as calf caretakers are by no means the weaker sex: they are true 'iron ladies'.

## Woman's work done by man

Sergey Chervyakov, calf caretaker of Zashchitnoye farming enterprise, asked our team to wait with the interview until he finishes feeding the newborn calves: one of the cows had just given birth to twins.

'Twins are usually tenacious creatures', says Sergey Chervyakov. 'They cling to life and always have a healthy appetite. Baby heifers are usually moody and can sometimes be hard to handle while baby bulls tend to be lazy and show hardly any resistance. This is what I have learned from my own experience.'

Five years ago, when Sergey just started working, he was not experienced at all. During the first six months in the position of a calf caretaker, he looked after older calves. Then he was transferred to work in the baby calf area where heifers and bulls are kept in individual hutches.

'It turned out to be more difficult to work with baby calves', shares Sergey Chervyakov. 'At first, it was simply a nightmare. I looked at my female fellow workers and wondered how they could remember every calf! I was thinking of writing a list to tick them off as I fed them so that I wouldn't accidentally skip anyone.'

It is really easy to get confused when you

have up to one hundred calves to take care of, especially when some of them need special attention.

'Robust calves do not cause any troubles. Once we had a sturdy fellow of 65 kg born. That one, of course, was easy to handle. But in some cases calf rearing takes a lot of effort. We have an experience of nursing a heifer, which weighed only 10 kg when it was born. The heifer survived, and we were very happy that we managed to save it.'

The calves are fed twice per day: at 7 in the morning and at 7 in the evening. The workers also have to clean the area and tend to the newborn calves. No wonder that a 12-hour shift passes like one moment.

'I thought it would be easier', recalls Sergey Chervyakov with a smile. 'After all, I am not a city boy, I was born and brought up in a village. However, when I started working I was amazed by my female fellow workers: they managed to complete their work in the blink of an eye, while I, a man in the prime of life, spent all day running off my feet and barely managed to do all my duties. I think by the end of the day I was more tired than all of them together.'

Sergey has never been afraid of hard work. After school, he studied at the navy

subdivision of the Voluntary Association for Assistance to Army, Air Force and Navy, then served in the army and after that worked as a machine operator, a farm worker and a manure removal equipment specialist. When the local collective farms went bankrupt, he worked in Moscow as a builder and a guard on a rotational schedule. Sergey



was happy when EkoNiva started operating in Shchigry district. When he learned about the possibility to get a stable job at Zashchitnoye, not far from his own house, he applied as a calf caretaker without any hesitation.

'The salary is paid regularly, I am confident about tomorrow', says Sergey Chervyakov. 'One more advantage is that I have an opportunity to help my wife with the household duties, which would be inconceivable if I kept on working on a rotational schedule. My wife and I keep four pigs, a calf, rabbits, ducks and hens.'

Sergey and his wife have been married for 16 years. They have a grown-up son who is studying to be a PE teacher. However, after completing the compulsory military service, he might stay in the army as a contract soldier. One never knows what life has in store for us. Nevertheless, one thing is certain: the son has a good example of his father who has never been afraid of any work no matter what hardships and prejudices were connected with it.

By Tatiana SIMONENKOVA



## Academy breaks stereotypes

The Career guidance programme of Kaluga oblast — School-leaver 2017 — has been gathering pace rapidly. Within its frameworks, 8-11-form pupils visited one of the most state-of-the-art farming enterprises of the region — Kaluzhskaya Niva.

The schoolchildren from Ferzikovo district took a tour of the Academy of Dairy Sciences. The children from schools of Bebelevo, Aristovo and Sashkino villages got familiar with cutting-edge farming practices. They saw milking robots and the process of putting cracked grain into sausage-shaped plastic bags. Most of all, they were impressed with the capabilities of Dairy Plan, a herd management software. It provides complete dairy herd management and allows monitoring milk production of each individual cow. The children were able to check all yield data displayed on the computer screen, how many times each cow had come to the robotic milking station and how much feed each cow had consumed during the milking.

According to Elena Gaydukova, Specialist of Ministry of Agriculture of Kaluga oblast, such tours enable the pupils not only to broaden their outlook, but also realise how different careers in



the modern farming industry are from the conventionally assumed clichés. 'Every time we come, the children are hugely excited and amazed to observe everything around', says Elena

Gaydukova. 'One can literally see how all their stereotypes of lacking career prospects in the farming industry crumble down. It is here that a lot of young people start considering a career in the sector.'

By Olga ATANOVA

## Golden Autumn on the calendar

At the beginning of October, Golden Autumn, the 8<sup>th</sup> Russian agricultural trade fair, welcomed its visitors.

The booth of Voronezh oblast was located at the pavilion dedicated to the regions of Russia. Academy of Dairy Sciences, a new but prospective project, proved to be a prominent representative of its region. Academy of

Dairy Sciences offers only natural dairy products manufactured in compliance with the State Standards.

'Apart from supplying healthy and tasty dairy products', says Christine Frank, Executive Director of the Academy of Dairy Sciences, 'the project also provides education and entertainment. We organise tours of our cutting-edge dairies in Voronezh and Kaluga oblasts for children and grown-ups giving them an insight into every stage of milk production, cow management and feeding, and also showing around

the Milk Museum, the only one in Russia.'

The booth of the Academy of Dairy Sciences did not escape the attention of the youngest guests, which is understandable, as there is no other place, indeed, where you can have a photo with an almost real cow and taste the 'Academic Milk'.

Mikhail Mamonov, Director General of Otechestvennaya Produktsiya Group sees a great potential in the brand.

'Favourable feedback of consumers is the most eloquent proof of the highest quality and good production control', comments Mikhail. 'Therefore, we would be delighted to see these products presented on the shelves of Bryansk shops, and we will come up with the plan how to make it real.'

By Olga ATANOVA







The Academy of Dairy Sciences opened a cafe in City Park GRAD in Voronezh, one of the largest shopping centres of the Black Soil Region.

## Academicians found home in GRAD

Little and grown-up Voronezh residents are really fond of this shopping centre which rather resembles a town with its own streets cafe and cinemas. Now, one can taste and buy fresh dairy products from the Academy of Dairy Sciences in GRAD:

milk, cottage cheese, kefir and yoghurt and exclusively fresh and natural fillings: fruit, berries, nuts, chocolate and honey. Our milk shakes will not only quench your thirst and satisfy your hunger quickly, but also invigorate and fill you with joy. At the opening, the Voronezh residents

residents. The children recited poems, painted and did craftwork with great enthusiasm. And some of them simply rushed to the Academy characters to give them a hug. Then, the little guests set off for a fairyland: with aqua make-up on, they turned into beloved cartoon characters.

'While my granddaughter was playing at the Academy, I tasted every item on the menu!', says Tatiana Pudovkina, a grandmother with 5-years' experience, smiling. 'So delicious! But the most important thing is that my granddaughter has approved of the Academy. She ate the cottage cheese and drank the milk with great appetite, though my Ksiusha does not easily grant her approval to dairy brands!'

With cold weather setting in, GRAD visitors are going to be offered speciality hot 'Academic Milk' with cinnamon and many other healthy and delicious treats.

By the way, this autumn, apart from the Academy's Cafe, several points of sale were also opened at Liski market places. The Academy's products are quite popular with the locals. They are also available at big supermarket chains and smaller shops of Voronezh, Lipetsk and Tambov oblasts.

By Yulia SALKOVA



cottage cheese, sour cream, kefir, yoghurt and 'Academic Milk'.

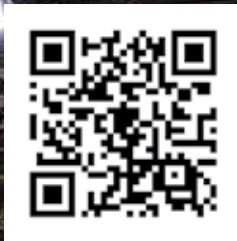
The whole range of the dairy products is produced by a new processing plant of the Academy of Dairy Sciences in Shchuchye village (Voronezh region, Liski district). The raw milk for the plant is 'supplied' by cows from EkoNivaAgro farms. All products are made exclusively from milk and by the State Standards.

What makes it more attractive is that the Academy's dairy cafe offers speciality milk shakes prepared from the 'Academic Milk'. 'We devised recipes for over ten special milk shakes with our dairy products', shares Christine Frank, Executive Director of the Academy of Dairy Sciences. 'They contain

enjoyed tasting the shakes and dairy products from the Academy of Dairy Sciences. Both were in high demand among the adults as well as the children. By the way, the 'Academicians' themselves — kind-hearted Cow Marta, cheerful and restless Zhu-Zhu Bee, prudent Professor Zorkin and inquisitive Girl Polya — were highly popular with the little Voronezh







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**7-9 February**  
**AgroFarm — 2017 international trade fair dedicated to livestock breeding and innovative technologies**

Venue: VDNH, Moscow  
Organisers: DLG International GmbH, Germany, Ministry of Agriculture of the RF

**6-10 February**  
**PRODEXPO international trade fair**

Venue: Expocentre, Moscow  
Organiser: Expocentre

**7-9 February**  
**Agroferma — 2017 (AgroFarm)**

Venue: Hall 75, VDNH VVC (All-Russian Exhibition Centre), Moscow  
Organisers: VDNH OJSC, DLG International GmbH

**28 February — 3 March**  
**15<sup>th</sup> International Trade Fair dedicated to livestock farming equipment and technologies**

Venue: Krokus Expo exhibition centre, Moscow  
Organisers: ITE Moscow

**February**  
**Round table discussion: machinery and technologies of farming season 2017**

Venue: EkoNiva-Chernozemye service centre, 46, Tsentralnaya street, Zaluzhnoye village, Liski district, Voronezh oblast  
Organisers: EkoNiva-Chernozemye

**February-March**  
**Seminars on farming technologies**

Venue: EkoNiva-Sibir service centres  
Organisers: EkoNiva-Sibir

**26 February – 8 March**

EkoNiva will be happy to see you at SIMA 2017, Paris international Agribusiness Show, France.

**EKONIVA**  
**ЭКОНИВА**

Publisher and founder: IA EkoNiva-Media LLC  
Registered office:  
79A Radishchev Street, 305004, Kursk

**Editor-in-Chief:**  
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The journal «ЭкоНива-Вести/EkoNiva-News» is registered by the Federal Service for Supervision in the Sphere of Communication and Mass Communications. Registered Certificate for Mass Media ПИ № ФС77 - 34820 of 23 December 2008. Signed for printing  
According to the schedule: 20.12.2016 at 11 am, In fact: 20.12.2016 at 11 am.  
Issue date: 28.12.2016

Translated by the International Projects Department of EkoNiva-APK Holding, LLC  
Printed by VIP Publishing House LLC, 51<sup>st</sup> Mokovsky lane, 305007, Kursk  
The circulation of the issue: 700 copies. Order № Distributed free of charge