AGRO ЦЕНТР News

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The corporate journal of the AgroCentre Company

AgroCentre gathers in "crystal harvests"

Hot issues:

Less downtime when AgroCentre is close by

Today's farming is unthinkable without reliable and efficient agricultural equipment. However, no one has yet built an agricultural machine that can operate permanently without servicing. That is why AgroCentre not only supplies farming equipment from the world's leading brands but also has invested in prompt servicing. It is obvious that proximity to a farm lowers the downtime of farming equipment. Therefore, this autumn the company is opening a servicing centre in the city of Kurgan, Trans-Ural region.

The new servicing centre will be the company's eighteenth division. AgroCentre facilities currently operate on the territory of the country's Central, Central-Black Earth, Western Siberian and Ural regions.

"The farmers of the oblast are closely cooperating with our servicing centres in Tyumen and Chelyabinsk", says Nikolay Ivanishchev, AgroCentre director-general. "However, some farms are located rather far away from those cities. So we decided to establish a servicing base in Kurgan in order to reduce the time needed to respond to customer requirements. Our task is to free farmers from undesirable downtime of their equipment".

The new servicing centre is equipped in accordance with the best traditions of AgroCentre, i.e. it is complete with modern workshops having trouble-shooting systems and a fleet of maintenance vehicles, all of which enables it to provide round-the-clock servicing. Spare parts in storage here will cover the entire range of equipment supplied. The stock will be replenished weekly. To minimise shipment time and expedite parts delivery, an addressed storage and stroke coding system will be introduced.

The servicing centre will regularly hold dedicated training sessions and master classes for specialists from the farms. In addition, the sales managers will always help choose the right machines and equipment for each agricultural enterprise with due regard to its production volume, the technologies used and the development strategy being pursued.

"Even though the servicing centre has not yet been officially opened, we already get acclaim from the farmers", says Sergey Mitrofanov, head of the AgroCentre branch in Kurgan. "In a month and a half we'll be able to service and repair machines of any complexity more quickly. We'll also provide consulting and training on the customer's premises".

The opening of AgroCentre in Kurgan is creating new jobs. The company is actively looking for employees, such as sales managers, servicing engineers and spare parts depot personnel. As Sergey Mitrofanov noted, AgroCentre offers not just well-paid jobs, but also steady growth in the agricultural business. All the company specialists regularly hone professional skills in Russia and at the equipment manufacturers' plants abroad.

By Yulia SALKOVA

Crystal harvests

Three Crystal Grain prizes went to AgroCentre at the annual dealer conference arranged by AGCO in Russia and the CIS.

AgroCentre specialists acknowledge that the "crystal harvest" was not only quite a surprise, but also a sort of a record. Three "crystal grain" prizes in three categories was an impressive achievement which no other dealers dared to think of.

"We didn't expect AGCO to appraise our work so highly", said Nikolai Ivanishchev, director general of AgroCentre-Holding LLC. "AgroCentre became the corporation's dealer only last year. We produced excellent sales result, selling around 230 units of equipment and opening more than ten servicing centres. We're glad all our efforts to promote AGCO equipment are duly appreciated by our partners".

AgroCentre received awards in three categories: "For completeness of the range of AGCO products sold", "Best debut", for high achievements among companies which started operating in 2011 (fulfilment of the sales plan and offering a wide range of products including a significant share of AGCO products), and "For the best AGCO equipment customer support in accordance with distributor's standards".

By Yulia SALKOVA

[AN EXHIBITION]

From Agritechnica to Agro-Omsk

The Tyumen branch of AgroCentre took part in the Agro-Omsk 2012 exhibition. The company had long wanted to meet Omsk farmers. As it happened, this was a mutual desire that arose far back last year at the Agritechnica exhibition in Hannover.

"We met with the Omsk farmers in 2011", says Artyom Ozhogin, AgroCentre equipment sales manager. "Back then they proposed participating in regional exhibitions and arranging our own Field Days. The farmers were displeased that they lacked knowledge of the equipment. So we willingly responded to their demands and are eager to help our Omsk colleagues whenever we can".

The exhibition featured an outstanding "hit" from Vaderstad, the Rapid combined seeder. This is a multi-role machine that showed itself off to advantage on different soils, both in seeding on stubble and in minimal tillage technology, which is particularly important for the farms of the region. This year, 150 hectares of arable land were struck by drought.

In addition, the JCB 531-70 loader was demonstrated. This is fitted with a variety of mounts, such as pallet loading gear, manure and silage grip and bucket. This "telescope" interested executives of farming enterprises involved in crop production and stock breeding. This is obvious, given that on multifaceted farms the loader will not stand idle and will pay for itself much sooner.

By Yulia SALKOVA

AgroCentre presents

At the Agro-Chelyabinsk 2012 exhibition of agricultural equipment, the AgroCentreZakharovo company stand presented a complete range of modern farming machines from Challenger, Vaderstad and JCB. The MT685D tractor and 647 Challenger combine harvester were the principal exhibits demonstrated by AgroCentre.

Chelyabinsk farmers already know about the Challenger MT 685 D tractor. In the last seeding season, it and the Rapid seeder from Vaderstad underwent trials on several farms of the oblast. According to Sergey Chichay, head of the Chelyabinsk branch of AgroCentreZakharovo, the series six model coped with the job well, doing what was expected of it. However, the drought that struck the farmers this year heavily impacted the crop.

"Featuring 370 hp, the Challenger MT 685D tractor is quite strong", says Sergey Chichay. "It differs from others in having a new chassis design which helps withstand high loads. The suspension rear mechanism's carrying capacity is 12 tonnes".

The farmers liked the Challenger 647 grain combine harvester. To achieve a high threshing quality, it employs an eight bar drum. The grain bin (capacity 8,800 l, discharge height 4.5 m, discharge rate 85 l/s) ensures high efficiency and discharge into any type of vehicle.

Beginning this year, the Challenger 647 harvester and MT685D tractor have been assembled in Russia.

By Anna BORDUNOVA

AgroCentre, the centrepiece of the Korenskaya Fair

The Inter-Regional Kurskaya Korenskaya Fair held in Kursk is the visiting card of this city, which is also referred to as the city of nightingales. This year the fair was arranged for the 12th time since its re-establishment, bringing together some 1,400 participants.

The AgroCentre's presence was impressively big. The company brought to the site more than twenty agricultural machines and equipment for various jobs. The product line of Challenger tractors was appealing to the eye. The Series Eight Challenger MT800C (470-610 hp) tractors were, indisputably, unbeatable favourites. Among the especially noteworthy tilling equipment were the disc harrows and Sunflower Challenger pre-seeding cultivators along with Carrier and Top Down cultivators from Vaderstad.

AgroCentre specialists are pinning their hopes on the Swedish company's new products, like Spirit and Tempo, in the expectation that they too will appeal to Russian farmers like the famous Rapid seeder.

"This is the fourth year our farm has used two Rapid Vaderstad four-row seeders", says Gennady Baulin, head of the Slavyanskoye Nasledіye farm. "Not a single serious failure has occurred all through this period. This multi-role machine performs six operations in a single pass. We seed wheat, barley, rye, and maize, invariably obtaining smooth and regular sprouts that subsequently yield excellent crops".

By Yekaterina GALUSHKINA

What could be tenderer?

At the YarAgro 2012 agro-industrial exhibition, specialists from the Yaroslavl branch of AgroCentreZakharovo introduced farmers to Challenger and Kverneland equipment, the globally renowned machines for a variety of agricultural operations. They also held consultations on various farming jobs and technologies.

The guests named the Challenger MT765C caterpillar tractor (320 hp) the gem of the exhibition. Compared to its wheeled counterparts, the caterpillar model treats the soil "tenderly", i.e. applies to it the least possible pressure. Its draught is higher, but skidding is lower. The tractor can operate at a speed of up to 40 km/h, saving up to 15% of fuel.

It is no surprise that this yellow tractor caught the fancy of the many farmers who are eager to acquire such an efficient tool for their farms.

"The caterpillar tow tractors are real 'work horses' on the fields", says Andrei Serikov, head of the Yaroslavl branch of AgroCentreZakharovo. "They operate perfectly on soft and wet soils, assuring an earlier entry of the tractor onto the field in spring. This is particularly important for regions with a short crop production time".

By Anna BORDUNOVA

Field Days with AgroCentre

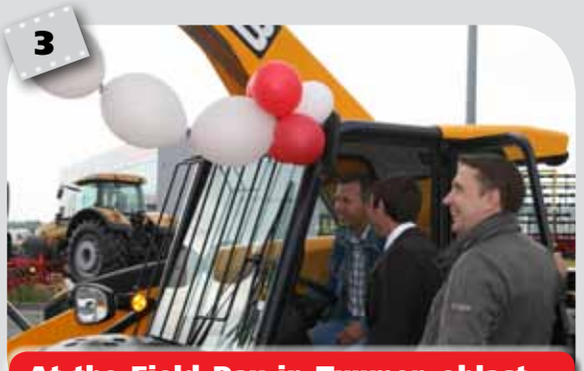
1

Yegor Chernyshov, deputy minister of agriculture of the Penza oblast government: "Though AgroCentre has worked in Penza less than a year, it has shown its efficiency, finding a new approach to farmers via unique promotional activities".

2

Sergey Chernev, Beryozka farming enterprise, Chesmensky district, won the ploughing contest in the "Best Tilling" category. He came onto the field in the Challenger MT 675C tractor the farm acquired from the Chelyabinsk branch of AgroCentreZakharovo.

3



At the Field Day in Tyumen oblast, AgroCentre provided an opportunity for anyone who wanted to test the JCB 531-70 telescopic loader, the most popular model with Russian farmers.

4

The Challenger MT595B tractor, the highlight of the programme, at the Field Day in Ivanovo oblast.

5

At the Field Day in Bryansk oblast, AgroCentre presented dedicated equipment from Kolnag for potato production.

6

At the Field Day in Tambov, AgroCentre demonstrated one of the most compact sprayers, the Challenger Spra-Coupe 4660, which operates at a speed of up to 20 km/h.

OFF TO FOREIGN PARTS

In the land of tulips and potatoes

Since olden times, The Netherlands has been considered the model setter in potato production. For centuries, the Dutch have been selecting potato varieties and developing methods of growing the plant. More than 160,000 hectares of farmland in the country are devoted to this crop. Its average yield is 40 t/ha. AgroCentre and the Kolnag Company provided an opportunity for Russian farmers to learn the secrets of potato production as it is pursued by foreign farmers. For this purpose, they arranged a trip for them to Holland's leading agricultural enterprises and to the Miedema plant, which specialises in the manufacture of potato production equipment.

For Russian farmers, such trips are like a breath of fresh air. These days, in order to make products competitive, it is imperative to master the world's advanced expertise of crop production.

The Russian guests arrived in The Netherlands on a remarkable day when the country had increased its territory by a further 50 sq km by commissioning yet another dyke. Inspired by this historic event, the farmers headed for the Miedema plant to enrich their professional knowledge. Since 1945, the company has set the model in the manufacture of potato production equipment. The range goes from potato planters, bund formers and haulm crushers to tilling and sorting machines and storage equipment. The guests noted the excellent manufacturing efficiency of the work process, which employs modern metal cutting machines like robots and automatic assembly lines. The farmers were briefed on the special features of two types of potato planters: Miedema (elevating type with plant-out scoops) and Structural (band/cable type). Miedema is a super-high precision planter operating both with sprouting seeds and cut tubers.

"Due to the unique cable system, the Structural potato planter is used for careful planting of potatoes in any fraction", says Vladislav Zhukov, sales manager of the Orel branch of AgroCentreLiski. "This is the world's fastest planter, working at a speed of up to 9 km/h".

Starting next year, Miedema will increase the manufacture of six- and eight-row potato planters expressly for Russia. The guests could not take their eyes off the new sorting machine, the Miedema Smart Grader. For three years, the company specialists have worked on the creation of this «smart thing». The electronically controlled grader inspects potatoes in all aspects. The inspection process is recorded using an on-line modem.

Innovative software analyses the data obtained very quickly and sorts the tubers based on their size, shape, and quality. It even "filters" them according to variety. The machine output is 15 t/h. It is very popular on the Dutch farms where the Russian guests headed for a familiarisation tour.

The foreign colleagues spoke about the specifics of the potato production. The Dutch make a point of avoiding time gaps between tillage and planting. They plant potatoes on the very first "ripening" day of the soil, which sometimes is determined in an old traditional way by taking a handful of earth, squeezing it in one's fist and dropping it under feet from waist height. If the lump crumbles on impact, the soil is considered «ripe» for planting. Early planting promotes fast tuber growth. The potatoes are planted with a between-row space of 75 cm. A hoe is used for tillage. The special feature of the Dutch technology is to keep mechanical treatment to a minimum. No subsequent between-rows tillage is employed after the bund formation. Before harvesting, the haulm is removed from the field. The tubers are left in the soil for a further 10 to 12 days depending on the variety and prospective use of the product, which helps it to ripen better and keep longer. Unlike in Russia, where field irrigation is a difficult issue, The Netherlands extensively use the drainage systems to adjust the soil moisture balance.

"The trip 'opened our eyes' on how to address many problems", says Boris Voronichev, director general of the Kartofelnaya Niva Orlovshchiny LLC (Orlovsky district, Orel oblast). "Much of what we have seen we shall use on our farms. For instance, we shall make corrections in the spraying system. We also shall employ the 'stop-shock' technique, which makes it possible to avoid damaging the tubers. And we shall switch over to the containerised seed storage system."

By Anna BORDUNOVA

On a visit to AGCO

The AGCO Company arranged a familiarization trip to its plants in the US for the best dealers of Russia and Ukraine. Making a successful debut as a dealer last year, AgroCentre today is one of the leaders in sales of the Challenger equipment in Russia.

The tour programme included visiting several states of the US where AGCO company's Challenger manufacturing facilities are.

In the state of Kansas, the delegation attended the AGCO Hesston plant. That's where WR series self-propelled seeders, rotary grain harvesters, reaping machines, balers and roll pickers are manufactured. Each day, the plant turns out 10 to 15 units of equipment, 30% of which are exported, while the remainder remains in North America.

At the AGCO Sunflower plant, Kansas, the guests watched the manufacture of Challenger tilling and seeding equipment. The manufacturing process is highly automated, for instance, all welding is done by robots. In a day, the plant turns out more than 15 machines!

The visit to the world famous Tractor Test of Nebraska independent laboratory proved to be very interesting. The laboratory tests tractors and supplies advice on their use. The Russian speaking group also enjoyed a visit to the Power Museum of tractors.

Touring the AGCO Jackson manufacturing plant, Minnesota, the guests familiarized themselves with a product assembly line, and subassembly and subsystem manufacturing lines. The plant's specialty is manufacture of the Challenger self-propelled equipment. This includes caterpillar tractors (1,500 units per year), wheeled tractors (1,000 units per year), sprayers (150 units per year), and fertilizer distributors (500 units per year). The AGCO Jackson president greeted the dealers from Russia and Ukraine and answered all the questions that interested them.

A meeting with foreign colleagues from the Zeigler dealer centre proved very productive. This focused on the specifics of work in farming markets of Russia and the US.

In addition to plants, the dealer delegation visited the Broberg Farm in the state of Nebraska where the AGCO equipment is widely used.

"The trip gave us a chance to better learn the Challenger equipment, its manufacturing specifics and advantages over the counterparts," relates Nikolai Bashkirov, head of the equipment orders department of the AgroCentre LLC. "This will help us, the dealers, to further promote the Challenger brand in Russia."

By Yekaterina GALUSHKINA

German style of agriculture

Christian Kowalczyk is deputy director for production and chief agronomist of the R L Bryansk LLC, which was established in 2008. This spring the fleet of the company's farming equipment has been replenished with an AEROSTAR 1200 Einbock machine. Christian shared his impressions of the row crop harrow as used in the first season and spoke about the farm.

The R L Bryansk farming enterprise is situated in the Sevsky district, Bryansk oblast. What is remarkable is that it was created by Germans. The project investor was the UFG financial group headed by Ekkart Homan, who assumed the office of director general. Christian Kowalczyk was commissioned to supervise production, growth technologies and harvesting. Christian hails from the Bavarian town of Coburg. He arrived in Russia in 2005 and worked for several years as a crop consultant on one of the Voronezh oblast farms.

At present, the German agricultural enterprise has 24,000 hectares of land, 20,000 of which are in tillage while the remaining 4,000 hectares lie fallow or are re-cultivated. The main crops being grown are winter wheat, spring barley, rape and peas. Lupine and sunflower complement the crop rotation.

Much attention at R L Bryansk is given to technical re-equipment. Cost-friendly technologies, such as the minimal tillage method and no-plough tilling technique, are widely used here, though previously they had not been practiced in the district. The company managers choose each new type of equipment very responsibly.

"The amount of equipment is not an end in itself", says Christian Kowalczyk. "There must be just enough of it for handling our 20,000 hectares. In a season, one combine harvester can harvest 1,700 hectares. Multiplying this by the total area we obtained what we need, i.e. 12 tractors and 12 combines. If we buy a further 10,000 hectares, we'll add another 6 machines. That way we won't have anything in excess!"

The farm acquired an AEROSTAR 1200 weeder from the Bryansk branch of AgroCentreLiski LLC with which it has cooperated for several years. The chain harrow is chiefly used for treating the winter wheat in order to stimulate tillering and crush the hard soil crust. This prevents evaporation of precious moisture from the upper soil layer.

"We didn't use the weeder for long on the sown fields of barley because of the weather", says Christian Kowalczyk. "However, the mechanical handling of the sown mustard and crucials produced a fine effect. Using this tool, in ten days we treated around 1,500 hectares, which means a daily output 150 ha. Three 12m disc harrows (capacity of up to 15,000 ha/yr) perform the soil surface treatment. For deep treatment, we use two Top Down 7m cultivators from Vaderstad. Their capacity runs to 8,000 ha/yr.

According to Christian, the soil surface treatment is started, if possible, after harvesting in order to stimulate the sprouting of windfalls and to retain soil moisture. The cultivation is done at a depth of 15 to 20 cm. Normally the fields assigned to spring seeding undergo the appropriate treatment.

One of the farm's problems is scarce rainfall, which does not exceed 600 mm per year across the oblast. Therefore, in order to control water content in the soil, it was decided to plant seeds in mulch.

Now the company is building a modern grain processing complex (not even Germany has anything similar). This will be able to simultaneously process 400 tonnes of products. Two sorters will sort the grain into 1st and 2nd class, discharging up to tonnes per hour. The dryers, running on gas, can pre-treat up to 60 tonnes of grain, depending on its moisture content. In addition to filling its own needs, the farm will also take in outsider's grain.

Valery Gudakov, head of the Sevsky district administration, Bryansk oblast, believes that the German management convincingly proves its efficiency every day. "With the arrival of the German colleagues, our land came back to life. And so did people on it. The farmer is pleased to see not just well-attended fields, but also the high culture of farming".

By Yekaterina GALUSHKINA

This year, AGCO will present at the Agrosalon 2012 international agricultural exhibition a new series of Challenger RoGator 1100 self-propelled sprayers designed expressly for Russian agricultural enterprises.

Let's play big!

Series 1100 machines have an operating fluid tank with a volume of 4,200 litres and are fitted with booms with grip widths of 30.5 and 36.5 metres. Booms with a section folding mechanism are adjustable in height relative to the soil surface. They feature the Autoboom automatic levelling system which keeps them level regardless of the changing terrain relief and vegetation height.

Thanks to hydraulically regulated wheel spacing within 3.05 to 3.86 m and to a clearance of 130 cm, the RoGator can treat the broadest selection of crops.

The new sprayers are multirole machines suitable for introducing both liquid chemicals and granulated mineral fertilisers. For the first time, a new AGCO Power engine was installed on the self-propelled sprayers, cutting fuel consumption by 6%. Combined with a seven-step transmission and improved drive, the AGCO Power unit ensures greater power transmission to the wheels and higher efficiency even under the most adverse conditions. The pneumatic suspension and the C-shaped flexible frame provides maximum smoothness on the move and a higher operating speed.

"The new machines are fitted with a cutting edge spraying system that is like nothing else in the world", says Dmitry Trofimov, AGCO product manager. "High spraying precision is achieved due to the operating fluid being delivered in adjacent sprayers with a pressure difference of only 0.07 bar even on the longest boom with a grip width of 36.5 m".

This becomes possible thanks to the latest engineering developments. The Challenger RoGator machines are fitted with an operating fluid delivery pump driven by a hydraulic motor and regulated by a pulse width modulation-operated valve. This type of design allows for quick adjustment of the pump output depending on the spraying speed and introduction rate, all of which reduces the risk of excessive or insufficient chemical input.

The pipelines mounted on the sprayers have no acute angles and narrowed portions. Accordingly, the operating fluid is delivered smoothly. During the operation, the boom pipeline's pneumatic cleaning system ensures minimum loss of time during chemical replacement.

The treble air filtration and positive pressure preclude the entry of chemicals into the cabin, thereby assuring maximum operator safety. The automatic air temperature control system in the cabin and the viewing capability, the best in its class, provide maximum comfort for the operator. The spraying control unit, RoGator Management Centre, enables the operator to control the various machine functions and to obtain, by means of the sensor display, the information he needs concerning the operation of all systems.

By Anna BORDUNOVA

Gigantic silos and record breaking dryers

A little over a year ago, AgGrowth Industries, the world-famous manufacturer of post-harvest equipment, opened a new plant in Canada where it builds the Twister silos, the biggest in their class. Company experts say this is a move to address farmers' needs. One of the first shipments of these gigantic silos has left for Russia.

This summer, AgroCentreLiski supplied Zarechnoye LLC (Kamensky district of Voronezh oblast) with six Twister FB 75-13 silos, each with a capacity of 7,000 tonnes. Their total capacity (for wheat) is 30,000 tonnes.

"Zarechnoye LLC is implementing a rather large meat production project with breeding stock numbering 30,000 head", Sergey Lomantsov, AgroCentreLiski executive director says. "A big herd needs a lot of fodder. And a large amount of fodder grain must be stored somewhere. Twister silos are today not only the most capacious among their peers, but they also best meet price-to-quality demands. This equipment is already being delivered to the farm. We're finishing the foundation grouting and are set to start installation work".

In addition AgroCentreLiski LLC has supplied Zarechnoye LLC with the MEPU CF-100 grain dryer. This is a pioneer on both Russian and international post-harvest markets. Thus far, this is Russia's first and sole dryer featuring such high output, up to 100 tonnes per hour. Machines by this manufacturer with a lower capacity, to 80 tonnes per hour, are known across the world for their impeccable performance, outstanding efficiency and trouble-free operation.

By Yulia SALKOVA

New and powerful Seed Hawk

At the *Farm Progress Show* in Canada, the Vaderstad Company presented the world's largest Seed Hawk 1300 caterpillar-mounted seed hopper fitted with the Seed Hawk seeder featuring an operating width of 25 m. The seed and fertiliser hopper weighs 15 tonnes, the length exceeds 15 m and capacity totals 46m³.

The hopper is divided into four variously sized sections for storing seeds and fertilisers: 10,500, 16,800, 16,800 and 1,400 litres. Filling takes up just 15 minutes since the seeds and fertilisers are delivered simultaneously.

"For all we know, this is the biggest hopper on the markets", says Brian Dean, the founder of Seed Hawk. "Combined with a 25 m direct seeding system, it can sow an area of 61 hectares without seed refilling at the standard rate of 120 kg/ha and fertiliser batching of 300 kg/ha."

Gustav Nilson, Vaderstad regional sales manager pointed out that the Seed Hawk 1300 model will be popular on the markets of Russia, Canada and Australia.

By Anna BORDUNOVA

The disc style

Series 1000 Challenger Sunflower disc harrows are designed to ensure careful pre-seeding tillage, thorough weeding and creation of favourable conditions for vegetation growth. AgroCentre recommends that agricultural producers set their sights on these machines, which are so popular with US and CIS farmers.

The Sunflower disc harrow smoothly tills at a depth of up to 15 cm, thoroughly embedding crop residues and creating an even field surface ready for seeding. Treating the soil with the disc harrow loosens it, so that it starts "to breathe", thus enhancing root growth. The even field surface after treatment by the disc is achieved thanks to the disc batteries being positioned in staggered order and overlapping one another. Located in an overlapping fashion, the front disc batteries neatly cut the soil while the rear disc batteries turn it back to the overlapped area. Such a pattern prevents the formation of crests and furrows.

The slightly concave discs are less prone to fouling and ensure suitable soil penetration of the harrow, enabling it to operate at a high speed. The depth adjustment and control system is installed in a single place in the harrow front. This is very convenient, since it thus becomes possible to easily set and safely control the tool's operating depth. The set depth is controlled hydraulically from the tractor cabin. The support wheels of the harrow side sections maintain the required tillage depth even on irregular fields. The special C-FlexTM harrow tines securely protect the disc blades against damage.

The Sunflower 1435 three-section flexible disc harrow with an operating width from 6 to 10 m is derived from the well known 1434 model. The new version was launched into production at the Sunflower facility in Beloit, (Kansas, USA) in 2008.

"The Sunflower 1435 offers a number of advantages", says Aleksandr Usov, senior sales manager of the Kursk branch of AgroCentreLiski. "Its added weight assures deeper tillage, while the improved chassis with tandem wheels increases stability".

The new hydraulic cylinder installation prevents rod rust. Thanks to the fastening bolts on either side of the battery, it is possible to remove the discs from any side. The double cleaners on side discs maximise surface cleaning. The design of the standard cleaners' attachment has been changed somewhat in order to remove more effectively any stuck wet soil. The shaft adjustment system has received a new fastening level.

For large farms, AgroCentre recommends the Sunflower 1544 harrow with an operating width of 13.8 m. Six pairs of tandem wheels assure optimal weight distribution and excellent cross-country ability on all soil types. The Sunflower 1544 is a highly productive harrow, featuring the flexibility of small harrows. These models use reinforced springs fitted on either rotation axle side to absorb shocks sustained by the front and rear disc batteries while negotiating ditches or hitting a hummock. Each disc battery section can be inclined transversally and longitudinally to ensure excellent terrain hugging on irregular and stony fields.

By Anna BORDUNOVA

Basis of the future harvest

The emergence of resource saving technologies has changed field treatment methods. Anxious not to disturb the natural soil structure, many farmers give up the plough. However, AgroCentre company specialists believe that it is too early to reject this tool altogether. In any case, every five years it is necessary to plough the soil deeply and to turn over a soil layer. This expressly applies to small farms which sometimes can't afford costly chemicals and fertilisers. However, they can't do without the plough, since no better method against weeds than deep mouldboard ploughing has been devised to date.

The Kverneland Company, the world's leader in manufacture of tilling equipment, presents the PN/RN series plough. This is a strong semi-mounted plough with a central wheel and step-by-step adjustment of the case grip width of 35, 40 and 45 cm. It can be manufactured with 5, 6, 7 and 8 cases. Due to special thermal treatment of the metal, all the plough components are strong enough for the tool to operate in the most difficult conditions. The plough is designed based on a solid square frame that underwent inductive thermal treatment. The specific features of the Kverneland ploughs are fixed grip width and a mechanically controlled support wheel in the centre.

"The PN series is fitted with the Auto-reset safety system for operation on hard and stony soils", says Sergey Dorofeyev, sales manager of the AgroCentreLiski LLC division in Kursk. "Thanks to the metallic plates, the plough can resist loads exceeding 900 kg. With added plates, resistance grows to 1,800 kg. The RN series has a rigid construction with a safety system in the form of a cuttable bolt that cuts off when the on-chisel load exceeds 4,500 kg". The wheel fitted in the middle of the frame ensures easy plough manoeuvrability in turning and while ploughing along ditches. The PN/RN plough design is simple and reliable, enabling the first furrow adjustment.

In order to minimise the turning radius, the turning point of the plough is located behind the standard. The plough is linked to the tractor by a dedicated linkage for better manoeuvrability. The return system has two reinforced hydraulic cylinders.

Kverneland PN/RN ploughs are offered with a wide selection of case types, skim coulters and disc blades. The first furrow width hydraulic regulator can be supplied additionally pursuant to the customer order. Both models are suitable for operation with the Kverneland Packomat soil packer, which makes possible ploughing, crushing and soil packing in a single pass.

By Anna BORDUNOVA

WELCOME RAINFALL

Russian agriculture functions in conditions where practically every third year is droughty and every fifth unpropitious or adverse. The fixed assets of the country's irrigation systems are 70% worn out. How can we lessen the dependence of agricultural production on the chance developments of climate, firstly drought? AgroCentre Company sees the solution to this problem in deployment of US-made Valley modern irrigation systems which we started to present in the previous issue.

The subject today will be another type of a frontal irrigation systems, Valmont® Irrigation.

The Valley frontal irrigation systems first appeared in 1977 and now they irrigate more than 405,000 hectares of grains, fodders, fibrous fodder crops and sugar cane across the globe. This type of equipment is believed to be one of the most efficient tools in its class, since it increases both productivity and profit.

"Regular irrigation doubles potato yields", says Maxim Shchukin, irrigation expert of AgroCentreZakharovo LLC. "In case of grain crops, the output more than trebles and in case of perennial herbs and maize for green forage, it grows by a factor of 3.5".

One of the advantages of the frontal irrigation system is the option for work on elongated rectangular and small fields. Unlike circular irrigation systems, the Valley frontal models move forward and backward over the field, irrigating up to 98% of its surface. Some of them can be towed or turned around, thus doubling the irrigated area.

All the frontal systems have no fixed centre, like circular systems, which is why the system can move as a whole single unit. Based on this specific feature, frontal systems are categorised according to the water pick-up method.

Method 1: delivery of water from a canal

A canal is dug in the centre across the field. The system moves over the edge with a lowered pump which picks up water from the canal. This system is suited for small fields, since it enables towing and turning around for greater area coverage. The flexible suction hose ensures minimum investment because it is suitable practically for every workable canal in the earth.

Method 2: delivery of water through the hose

This method employs polythene hoses of different lengths with an inside diameter of up to 200 mm. They are connected to the head pressure pipe.

This is an ideal version for fields irrigated by flooding, by the trickle method or by fixed irrigation systems. This kind of versatile device can perform the functions of a standard frontal towed or rotary sprinkler.

"The Valley frontal irrigation systems use many identically simple, strong and durable subassemblies and components", Maxim Shchukin points out. "This improves their reliability and functional performance, which is vital for farming operations".

By Yekaterina GALUSHKINA

Principal advantages:

- maximally increased irrigated area;
- increased profitability;
- economy of water resources;
- reduced consumption of superficial drainage on some soil types;
- use of general purpose farming tools both for irrigation and introduction of chemicals and fertilisers together with watering;
- reduce labour input by 50% compared to surface irrigation.

TopDown into the thick of battle!

AgroCentre has facilitated gathering of intelligence by arranging a demonstration of agricultural equipment at the country's agricultural enterprises. Presently "the gathering of intelligence" is proceeding at Penza enterprises where the TopDown stubble cultivator is undergoing trials. TopDown is a product of Vaderstad, a leading Swedish manufacturer of tilling and seeding equipment.

In July through August, AgroCentre has performed tilling at eight agricultural enterprises of the region that wished to test the TopDown 5 metre cultivator built by Vaderstad.

"The idea of testing the cultivator in action on the fields of enterprises in the oblast was proposed by the Penza farmers themselves at one of the Field Days", says Sergey Polyakov, head of the Penza branch of AgroCentreZakharovo. "We decided to demonstrate all the advantages of this multirole cultivator by showing it «in the flesh" in various districts of our oblast".

TopDown ideally tills the soil at cultivation depths of from 3 to 35 cm. Unlike ploughing, after treatment it leaves straw on the field, thereby significantly reducing soil evaporation. TopDown does the crushing of crop residues, the cutting of weed roots, the loosening of soil, packing, and levelling in a single pass, thus replacing several traditional tilling machines. After its pass, the field is ideally smooth and ready for seeding. TopDown is very economical and efficient, since it does not turn over the soil layer. Moreover, the optimum speed of plough-aided cultivation is not more than 5-7 km/h, whereas TopDown operates at a higher speed of 10-12 km/h.

The cultivator was tested on various fields of agricultural enterprises in the Penza oblast, including weed-covered fields that had not been treated for over three years. One of the hardest "battles" awaited the Swedish machine on 100 hectares of the Botanik farm (Mokshansky district).

"We set a serious task for TopDown", says Nikolai Bazhenov, head of the agricultural company. "The field was badly weeded and not treated for four years. However, the cultivator did the job excellently. It crushed the weeds, levelled the field surface, and 'crumbled' big soil lumps. Of course, to attain ideal conditions in the field we should go over it with TopDown once more, but considering that the field sported weeds up to your waist, just one pass gave excellent results".

By Yulia SALKOVA

TOPCON in a constellation of three systems

Navigation equipment is becoming increasingly popular in agriculture. GPS systems ease the operator's work and help farmers to save up to 1,500 rubles per hectare. The TOPCON 150 satellite navigation system from AGCO for automatic equipment control is gradually winning over the Russian market.

"The TOPCON 150 automatic control system is interesting for our farmers primarily due to its multirole capability and high precision signal transmission", says Maxim Gorelko, equipment orders manager at AgroCentreZakharovo LLC. "It performs all the functions acutely needed to increase the agricultural efficiency".

The TOPCON 150 is ideally suited to all self-propelled agricultural equipment and can be relocated from one machine onto another. The navigation system can be easily installed on tractors, combine harvesters, sprayers and self-propelled mowers. The system is designed for operation on fields of any shape and has operating patterns to suit all types of driving (on direct, twisted or circular lines).

This navigation offers a particularly precise and reliable GNNS receiver of the TOPCON AGI-3 model. By using the 72-channel AGI-3 receiver, it is possible to receive signals from a constellation of three satellite systems, i.e. GPS, Galileo, and GLONASS. Information on the location is updated at high frequency, which assures secure control of the vehicle.

"TOPCON 150 makes it possible to achieve the highest precision in practically all farming jobs", notes Maxim Gorelko. "Using it, the operator can reduce overlapping, improve the quality of farming operations, cut back on fuel, lubricants, seeds, fertilisers, and plant protection chemicals, extend equipment service life, and, above all, save time".

The TOPCON 150 assures operation at three precision levels, depending on the farm's needs and the specifics of its production. The owner of equipment can himself choose the EGNOS (European Geostationary Navigation Overlay Service) corrective signal for free use of metric accuracy. Pursuant to the customer's request, a higher precision system can be provided.

The GX-45 control panel includes Russian language software which is simple to use and requires no lengthy special training. During the operation, the display shows the area being tilled, the machine speed and the number of the current navigation line. All the information is gathered, automatically stored and can be transmitted to a computer.

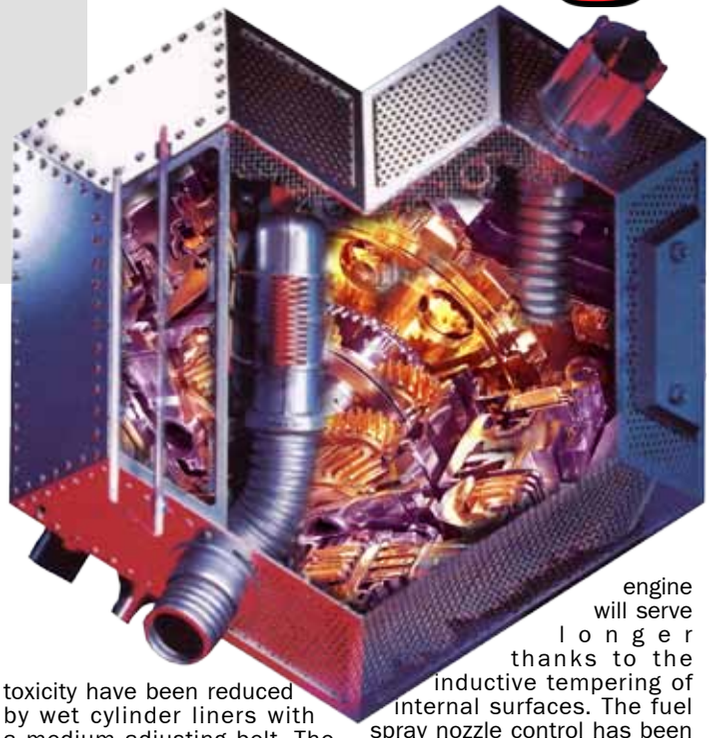
In addition, "the autopilot" recognises the borders and spreads, enabling the machine to easily turn and pick up the next strip. Mapping of the borders simplifies the creation of fields. The automatic maps of an area being tilled help to easily recognise omitted portions and overlapped areas.

It should be noted that the use of the automatic control system not only enhances the accuracy of all farming jobs, but is also an important source of information for the automation of production process.

By Yekaterina GALUSHKINA

Getting down

"Looking under the bonnet lid" means, in the language of servicing engineers, checking the operability of the engine. After all, if the engine is not functioning properly, a vehicle turns into a pile of useless iron. In our column, we shall "raise the lid" of Challenger caterpillar tractors and look into the very heart of the machines.



Challenger caterpillar tractors are powered by modern diesel engines manufactured by Caterpillar, USA. The CAT C15 ACERT engine (C18 ACERT® Diesel Engine) is the heart of the Series Eight caterpillar tractors. The six cylinder, four-stroke engine with direct fuel injection, turbo-charging system fitted with an atmospheric air cooling system of the charge air, fuel system electronic control unit (ADEM™ A4), high pressure fuel system MEUI and highly efficient oil filters has a lighter construction of the cylinder assembly and detachable connecting rods. Fuel consumption and exhaust gas toxicity have been reduced by wet cylinder liners with a medium adjusting belt. The engine will serve longer thanks to the inductive tempering of internal surfaces. The fuel spray nozzle control has been improved. A modified design of the oil filter will reduce engine wear.

The Caterpillar engines meet Tier 3 and Stage IIIA standards in terms of toxicity of spent gases due to the use of ACERT technology, which aims at reducing the amount of noxious exhausts. Thanks to ACERT, a precise amount of fuel is provided for each combustion cycle. The advanced conditioning system optimally cools the combustion chamber. In addition, the combustion head diameter is expressly designed for free access of air to the engine. This technology has undergone trials on 350 different vehicle types during 520 hours of intense operation.

AgroCentre servicing specialists will help to monitor operation of the caterpillar tractors' heart. The accrued expertise, dedicated knowledge and modern equipment enable the engineers to perform diagnostics on the engine in a timely manner and to measure correctly the

POST-FLIGHT REVIEW

Telescopic love

Why do Russian farmers like the JCB telescopic loaders? The answer is obvious: for their efficiency, versatility, reliability, strength and safety. Over the course of thirty years, JCB specialists have sought to improve these «telescopes», turning them into machines that win the love of users once they acquire them.

The JCB 535-95 Agri loader with its laterally positioned engine and three-section boom lifts a load of up to 3.5 tonnes to a height of nine metres. It copes perfectly with such jobs as fodder transportation, manure removal, and loading of grain and organic fertilizers. The "telescope" is a must in handling silage clamps or in placing rolls into boxes. The special feature of the loader is the reinforced boom designed in such a way as to distribute the stress over the entire boom length, thus reducing fatigue and preventing likely damage in the nose portion. The length of the connection of the internal and external parts of the boom is around 1 metre, which prevents its breakage. Due to the low position of the control panel in the cabin and the large window, the operator commands a good view and can fully monitor the operation. The convenient location of the transmission components creates ideal conditions for repair. The machine's basic elements, such as the shafts, gearbox, hydraulic pumps and engine are simple to maintain. Thanks to sound and vision sensors, the operator instantly receives information concerning the state of the engine and transmission.

An opinion:

"In 2010 we bought the JCB 535-95 telescopic loader from AgroCentre", says Roman Pekhterev, assistant director of the Pogarsk Potato Factory (Pogarsk town, Bryansk oblast). "We fell for the machine thanks to its outstanding performance. The loader design envisions a lateral position of the engine, which is convenient for servicing and increases the lifting capacity by shifting the boom backward. The loader operates day and night, replacing several machines. It is ideally suited for use in storehouses, potato storage depots, stockbreeding facilities and out on the field. It copes with any task. And its maintenance is remarkably easy".

By Anna BORDUNOVA

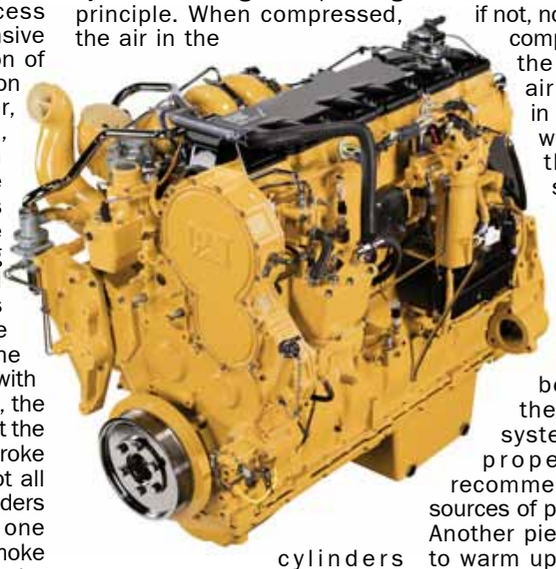
to the essentials

important sign of its operability, compression, which assures the permanent operative readiness of the machine.

Some remarks on compression

Aleksandr Neklyudov, AgroCentreZakharovo LLC technical director

Using special hard- and software from AGCO, AgroCentre service engineers thoroughly measure the compression, a process which includes comprehensive diagnostics of the condition of the engine, cylinder and piston assembly, unit head, liner, distribution mechanism, power supply system and start-up devices. The compression determines the pressure created in the engine cylinders during rotation by the starter and when the fuel supply is deactivated. In a way, the compression determines the rate of the cylinder's filling with air. At reduced compression, the amount of air compressed at the final stage of compression stroke is much smaller, so that not all the fuel injected into the cylinders burns completely. On the one hand, this results in higher smoke content of exhaust and, on the other, increases fuel consumption and decreases engine power. The reason why the degree of compression is essential in a diesel engine is explained per se by the diesel engine's operating principle. When compressed, the air in the



cylinders gets very hot. At the end of the compression cycle, when the air temperature reaches the maximum, fuel is injected into the cylinder. If the air temperature is sufficient for combustion of fuel, combustion will take place; if not, no flare will occur. The compression ratio shows the level to which the air temperature rises in the cylinders and at which temperature the diesel can be started. Whereas farm engineers seek to thoroughly study the tractor engine all on their own, the AgroCentre specialists advise that compression be measured when the remaining engine systems are operating properly. They also recommend not using extra sources of power for the battery. Another piece of advice is not to warm up the engine before measuring the compression and to make checks in the temperature range at which the tractor is started on a daily basis.

By Anna BORDUNOVA

AN EVENT

JCB: inside and out

“Every opportunity is a step to success!” Under this slogan, JCB, the global leader in the manufacture of telescopic loaders, held a practical on-field seminar for its dealers from Russia, Ukraine, Belarus and Kazakhstan at the facilities of the Belgorod branch of AgroCentreLiski. Here the dealers could study the machines at full length.

The range of telescopic and front-end loaders, from mini to maxi types, included both well known and new models. Following a theoretical briefing, the company specialists got down directly to practice. The trainees fully tested all the loaders’ capabilities, not omitting a single model. Sure enough, they set their sights on the new products.

The audience’s sympathy prize went to the new wheeled and tracked mini-loaders PowerBoom 225 and 225T that looked rather like toys. The unique PowerBoom design employs a single bar jib instead of the normal double bar type. The single jib design impedes the operator’s all-round observation capability less, thereby increasing the system’s efficiency and on-site security. The safe operation of mini-loaders is assured by the lateral exit and by the door size, which has been increased by a factor of 2.5. The concealed emergency exit is conveniently located in the windshield.

“The future of the JCB PowerBoom 225T mini-loader is very promising”, said Vladislav Zhukov, sales manager of the Orel branch of AgroCentreLiski. “This is a real transformer doing an excellent job under direction of the operator. The smooth performance of caterpillars, remarkable compactness, and excellent visibility will make these machines bestsellers in Russian agriculture”.

Yevgeny Ankudinov, head of the Orel branch of AgroCentreLiski, fell for the new Loadall 550-80 Agri Plus. This telescopic loader, the strongest among its counterparts, can lift up to 5 tonnes to a height of 8 metres. JCB specialists worked on the creation of this machine for 18 months. The telescopic loader is powered by the JCB DIESELMAX 145 hp engine. The Powershift transmission enables the machine to move at a speed of up to 40 km/h. An unprecedented pull force of 6.5 t is assured by the solid Z-shaped carriage drive. In order to stabilise the machine under such loads, the designers made its chassis from 25 mm thick steel.

“This ‘weightlifter’ is ideal for large farms”, says Yevgeny Ankudinov. “It copes quite well with all the tasks assigned to it. Starting this year, AgroCentre will supply the new machine to Russian farmers.”

An updated loader, JCB 527-58 Agri, known to Russian farmers as a super-manoeuvrable and multiple-use machine for jobs on small stockbreeding farms, was a major focus of interest. The JCB specialists improved this model for work on poultry farms by adding options expressly developed for the Russian and CIS markets. Those include blue headlights that do not disturb the birds and reduce their stress, heated mirrors, 2,000 mm forks for removing bird cages, and a large bucket, 1.6 cubic metres, for loading and unloading grain, bird fodder and bird droppings.

By Anna BORDUNOVA

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