

**Farit Rakhimovo**

In 2009 Farit Rakhimovo built a completely new dairy unit with 16 milking robots. In 2012 he is going to double the size of this unit, bringing his total investment to £30 million.



Number of cows:	<b>1,150</b>
Annual milk sales:	<b>9,500,000kg</b>
Unit size:	<b>6,200ha</b>
Average milk yield:	<b>8,340kg, 3.9% fat, 3.5% protein</b>



Farit Rakhimovo and Nazip Gataullin Cows are milked 2.4 times each day



Milk is collected daily by Danone



A security guard keeps a close watch

Russian mega business invests in automation despite low cost of labour

# Milking with 32 robots

Rakhimovo Farm is ready for expansion. Towards the end of 2012 its owner, Farit Rakhimovo, will double the size of his outfit from 16 to 32 milking robots. The young Russian wants to be less dependent on a work force and has opted for automatic milking.

text **Tijmen van Zessen**

At the entrance to Rakhimovo Farm there is a small, plain house. The little building has one window and it's the accommodation for the security guards who keep watch over the huge Russian farm. The door opens and a member of staff steps out. He calls his boss on his mobile and discusses whether the farm manager is expecting a visit. In Russia guarding property is not a

luxury. It is essential, particularly if new and properly functioning equipment is involved. Since 2009, 16 milking robots from DeLaval have been operating on Farit Rakhimovo's farm and as many again are on their way there. And this makes Farit's by far the biggest unit in the world using milking robots.

**Australian heifers**

Farit lives in Kazan, the third largest city in Russia with a population of 1.1 million, which is about two hours drive from his farm. "I've always wanted to work in the agricultural sector. In the Soviet era my grandfather was manager on a state farm in this region for 35

years," says Farit. He is proud of his agricultural roots and in 2008 formed a joint venture with investors who wanted to build up a dairy unit from scratch with him.

Russia's milk production is increasing slowly because the number of cows is declining. So in 2008, to stimulate production, the authorities set up the 'Agriculture development 2008-2012' programme. This subsidised well-thought-out projects with a virtually interest-free loan. Farit was eligible for the scheme, possibly helped by the fact that his father has a seat in the Duma (the Russian parliament). He invested £30 million at a net interest

rate of 1%. A huge sum that includes the cost of all the equipment, buildings, mechanisation and breeding stock – around £14,000 per cow.

With 32 robots, 65 cows per robot and 8,000kg of milk per cow that is a £1.80 investment per kilogramme of milk.

"We had five plane loads of heifers flown over from Australia – that's 200 heifers per plane. And we also imported 478 head of young cattle by sea," explains Farit, totting up the considerable sum invested.

He also invested in land – 6,000ha in total. In the Kazan region land costs £335 per hectare.

The unit's buildings and installations



The freestall barn is divided in four sections with 120 cows per department

## Big production – but still not enough milk

Russia is the biggest importer of dairy products in the world. Although it produces 30.2 billion kilogrammes of milk and is worldwide the seventh largest milk producer, there are insufficient dairy products for the Russians who are becoming steadily richer.

Almost half the milk is produced on farms with less than five cows. The national average herd size is 2.8 cows (see table 1). During the Soviet era these little farms were crucial for sustaining the people living in the countryside. In these more prosperous times these little farms are slowly but surely disappearing.



Figure 1: Milk density in Russia in tonnes of milk per square kilometre (source: IFCN)

To stimulate milk production, Russia subsidises the dairy industry, both at the level of family farms (100 to 150 cows) as well as via mega projects, such as that of

Farit Rakhimovo. "Rakhimovo is one of our most important clients in Russia. But we see more and more farms that milk more than a thousand cows. In Russia we have 60 clients with more than 2,000 cows," says the marketing director for DeLaval in Russia, Bo Weifeldt. Most of the milk production is concentrated in the south west of Russia (see Figure 1). The federal republic of Tatarstan, where the Rakhimovo farm is situated, is one of the most productive regions with more than 15,000kg of milk produced per square kilometre and a production of 4,800 kilos of milk per cow in 2010.

Table 1: Dairy farming statistics in Russia (source: IFCN)

	1996	1998	2000	2002	2004	2006	2008	2010
<b>milk production in FCPM</b>								
production (billion kg)	31.52	29.50	29.27	30.66	29.48	29.28	30.52	30.22
number of cows (x 1000)	16,557	13,837	12,771	11,873	10,425	9,647	9,129	8,800
average milk yield per cow (kg)	1,900	2,100	2,300	2,600	2,800	3,000	3,300	3,400
<b>dairy farming design</b>								
number of dairy farms (x 1000)	—	—	—	2,222	2,679	3,135	3,160	3,160
number of cows per farm	—	—	—	5.3	3.9	3.1	2.9	2.8





A model of Rakhimovo Farm, with a cross-section of one of the dairy barns

occupy just 20ha. In 2008 Farit was taken by DeLaval to Mason Dixon Farms – a family run business in the US with 16 milking robots and a herd averaging 10,000 litres – to find inspiration for his plans.

Farit became an instant enthusiast and wanted to set up a comparable farm with similar productivity. DeLaval supported him in setting up the farm and advised a ‘feed-first system’ with supplementary concentrates. The lactating cows are divided between two barns each with four sections of 120 cows and two robots.

In Russia, where the wages are relatively low, the choice of robots for milking is not an obvious one. Rakhimovo employs 50 staff, each with an average salary of £300 per month. “It is difficult to find motivated staff who have the necessary capacity and are sufficiently reliable. Many Russians choose a job outside agriculture,” says Farit.

### Training course

He has devised a training course to teach new staff how to milk with a robot. But is 50 staff for the current number of cows perhaps too many when there are robots in the barns? “They don’t all work directly with the cows. We have two people looking after the feet, three for AI, two looking after young stock, one for general co-ordination of animal health and one herd manager for feeding the livestock. But we also have people involved in harvesting forage, administration, security and cleaning the buildings.”

In Russia there is more uncertainly

about growing and harvesting sufficient forage than producers are used to in the UK. Average rainfall in the region round Kazan is between 500mm and 550mm and in 2010, due to drought, Farit had to buy in additional feed and forage, while the milk production per hectare was still well under 3,000kg.

“And the unit will soon be operating 32 robots at full capacity. So we now have 50,000 tonnes of forage in store that’s enough top feeding the herd for two years and is meant as a buffer,” he explains.

“This year we harvested 45t/ha of maize and 4t/ha of corn per hectare, the previous year that was eight tonnes and 1.3 tonnes per hectare respectively, due to the drought.”

### Disciplined approach

Of the total area of 6,300 hectares, 3,300ha is intended for the production of forage, 2,000ha for maize and 1,300ha for lucerne. Rakhimovo uses a good 2,500ha for corn and 250ha for potatoes.

Besides maize silage and lucerne the ration at Rakhimovo consists of oilseed pulp, sunflower seed, soya, corn and supplementary concentrates. This ration supplies maintenance plus 15 litres of milk per cow, the animals must get the rest from concentrates, to a maximum of 12 litres.

The herd average yield for 2010 was 8,340kg, or 25.1kg per cow per day. At the moment many of the cows are dry or in late lactation, so the production of 850-cow herd runs at 17,500kg of milk per day or 20.5kg of milk per cow.

At the moment milk production is lucrative for the Russian – the milk price is £37 per 100kg, while the cost of producing 100kg of milk is just £25. “The cost of feed and fuel are high. Including the costs for the cultivation of the forage during the past year we spent £3.50 per cow per day on forage. Depending on the level of production, that is between 12.5p and 16.5p per 100kg of milk.”

Milk quality-based payment is also becoming more common in Russia. Milk with a lower bacterial count earns more. Proudly Farit tells us that in the past year his farm even carried off the Danone Cup for milk quality. “The basic price assumes 3% protein. For each tenth of a percent above that Danone pays a bonus. In 2010 we achieved, on average, 3.9% butterfat and 3.5% protein,” adds herd manager Nazip Gataullin.

Nazip is responsible for something that is unusual in Western Europe – he takes a sample from each milk delivery and analyses it in his own laboratory. Corruption is not a rarity in Russia and Farit wants to eliminate deliberate mistakes. “I’d say that about three times a year we ask an independent laboratory for a second opinion.”

Farit also pays his workers according to performance. Those responsible for ensuring that the cows are milked each day are paid more according to the number of milkings per cow per day, which currently averages 2.4. The number of ‘too late’ cows, the number with mastitis and the somatic cell count (now 220,000) also have an impact on the salary.

Farit is conscious that the performances on his farm cannot yet compare with those on a Western European dairy farm. “The average production per cow in this part of Russia is less than 5,000kg of milk per year. So we are producing relatively efficiently, but things could be better.

“In breeding we aim strongly at increasing productivity with bulls such as Bonair, Lobby, Larez, Diabolique, T-Derek, Harmony and various Russian OMan sons. We must also work hard to reduce calf losses. For every 100 heifer calves born only 75 will end up in our milking herd.”

If Farit succeeds in raising the technical results to the Western European level, then he will cash in on the current market situation. “Our interest subsidy is based on a 12-year loan and I’m expecting that we shall pay off our debts in 11 years.” |